

Claire M. Fagin Hall
418 Curie Boulevard
Philadelphia, PA 19104-4217

www.nursing.upenn.edu



Events

Please join us on and off campus.

OCTOBER

24 Graduate Programs Information Session

On-campus information session for MSN, DNP, and PhD programs to learn about the admissions process, timeline, and more.
Philadelphia, PA

24 SON Research and Innovation Colloquium

George Demiris, PhD, FACMI, Penn Integrates Knowledge University Professor; Jie Deng, PhD, RN, OCN, FAAN, Associate Professor of Nursing; and Amy M. Sawyer, PhD, RN, Associate Professor of Sleep & Health Behavior, will provide an overview of their research.
Philadelphia, PA

25 Claire M. Fagin Researcher Award + Lecture

Featuring the 15th Fagin Distinguished Researcher Award recipient Dr. Kathy Bowles, Professor of Nursing and the van Ameringen Chair in Nursing Excellence
Philadelphia, PA

NOVEMBER

2 Adult-Gerontology Primary Care Program Reunion

Philadelphia, PA

6 Webinar: PHD Program

Admissions webinar about our PHD program, including the admissions process, timeline, and more.
Online

7 SON Research and Innovation Colloquium

Rose Mary Xavier, Ph.D., PMHNP-BC, Post-Doctoral Research Fellow in Neuropsychiatry, Perelman School of Medicine, will present "Application and Utility of Polygenic Risk Scores in Symptom Science"
Philadelphia, PA

9-11 Homecoming Weekend, including:

- Mix and Mingle: Penn Nursing Alumni Board, Committees, & Sigma Theta Tau XI Chapter
 - Nurse Networking
 - Power of Penn Palooza
- Philadelphia, PA**

28 SON Research and Innovation Colloquium

Margo Brooks Carthon, PhD, RN, FAAN, Associate Professor of Nursing; Taylor Hedgeland, RN, BSN, Penn-Presbyterian Hospital; and Heather Brom, PhD, RN, Postdoctoral Fellow, will present

"Addressing the Needs of Socially-At-Risk Hospitalized Patients through Innovation and Design-Thinking"
Philadelphia, PA

DECEMBER

5 Webinar: DNP Programs

Admissions webinar about our DNP programs, including the admissions process, timeline, and more.
Online

JANUARY

9 Webinar: Nutrition, Obesity, and the Microbiome

with Tanja Kral, PhD, Ariana Chao, PhD, CRNP, and Charlene Compher, PhD, RD, CNSC, LDN, FADA, FASPEN
Online

FEBRUARY

6 Webinar: The Role of a Coach in Building Your Career As Confident Leader

with alumna Nancy Valentine, RN, PhD, DSC, MSN, MPH, FAAN, FNAP
Online

13 Nursing Story Slam

Faculty and students from Penn Nursing, as well as Penn Medicine nurses, share stories about their nursing experiences.
Philadelphia, PA

MARCH

21 Power of Penn event

featuring Georgia Sadler HUP'70, Nu'72, WG'73
San Diego, CA

APRIL

2 Power of Penn event

with President Gutmann
Philadelphia, PA

27 HUP Alumni Spring Luncheon

Philadelphia, PA

30 Power of Penn event

featuring Robert Karsh C'85 + Abby Belcher-Karsh Nu'88, GNu'93
Atlanta, GA

MAY

17-19 Alumni Weekend

including a special 50th reunion for the HUP Class of 1969
Philadelphia, PA

20 Commencement

Philadelphia, PA

For more information, please visit www.nursing.upenn.edu or call the Nursing Alumni Relations team, at 215.746.8812.

A hormonal link could provide a new weapon in the battle against addiction.
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Why a nursing background can offer an ideal template for leadership.
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Penn Nursing



The Rise of Nutrition

With Penn Nursing in the lead, the science gets its due.

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by Maren Caruso

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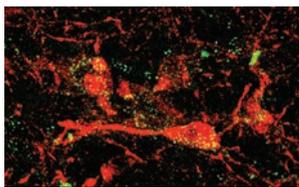
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18 — Battling Addiction
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^ Exendin-4 binding to
GLP-1 receptors expressed
on dopamine neurons (red
fluorescence) in the VTA.



Stay connected to Penn Nursing's
Innovating for Life and Living Campaign.
Follow along and share on social media with
[#PennNursingInnovation](https://twitter.com/PennNursingInnovation).



Each patient
presents a unique
problem requiring
a unique feeding.
—Charlene Compher

PHD RD CNSC LDN
FADA FASPEN, p. 26

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We had different arcs
in our careers, and then
came together around a
disruptive technology.
—Carrie Tompkins
Stricker GNu'98 GR'07
PHD RN AOCN, p. 16



Pursue Your Passion

at the **#1** nursing school in the world.

Whether it's one of our **11 MSN programs**, a **post-master's DNP**, a **PhD**, or one of our **dual degree programs**, Penn Nursing provides a premiere, Ivy League education by the best and brightest minds in nursing research and practice, and gives graduates the tools they need to take their professional development to the next level.

Join us at one of our upcoming admissions events, or visit us online at www.nursing.upenn.edu to learn more.

10/17/2018	Graduate Application Webinar	Online
10/24/2018	ANCC National Magnet Conference	Denver, CO
11/6/2018	PhD Webinar	Online
12/5/2018	DNP Webinar	Online



Penn Nursing

UNIVERSITY OF
PENNSYLVANIA SCHOOL OF
NURSING MAGAZINE

Editorial Staff

EDITOR

Sasha Dages

ALUMNI NOTES EDITOR

Monica Salvia

EDITORIAL CONSULTANT

Jay Heinrichs

DESIGN

Pentagram

Administration

MARGARET BOND SIMON

DEAN OF NURSING

Antonia M. Villarruel

DIRECTOR OF MARKETING AND

COMMUNICATIONS

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University of Pennsylvania School of Nursing Magazine

FALL 2018

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215-898-9891

magazine@nursing.upenn.edu



Championing Nutrition

HAMDHI ULUKAYA. CERTAINLY not a household name. He was greeted with polite applause when President Gutmann introduced him to the 2018 Commencement audience as he was awarded an *Honorary Doctor of Humane Letters* degree at the University of Pennsylvania. Once she mentioned that Hamdi was the founder and CEO of Chobani yogurt, though, the crowd went wild. And I was fortunate enough to sit next to him at the Penn Honorary Degree dinner the night before. Yes, I love Chobani yogurt. But being familiar and admiring of Hamdi as an innovator, entrepreneur, humanitarian, advocate for nutritious foods, and champion of refugee and immigrant rights was the reason I was so grateful for the opportunity to hear about his journey.

Hamdi's road to success is remarkable—and at the center—his unwavering commitment to “do good.” It was Hamdi who I thought of as I was reading this issue of *Penn Nursing* and our accompanying campaign report, *Impact*. His life's work speaks to the University of Pennsylvania founder Ben Franklin's concept of “doing well by doing good.”

Penn Nursing embraces that idea as well, and you can plainly see that in this issue of our magazine, which features our innovative work in nutrition. The scope of our scientific inquiry in this area ranges from human eating behaviors to understanding and addressing the impact of nutrition on health and disease. Take, for instance, the work of Kimberly Kovach Trout, assistant professor of women's health and director of the nurse-midwifery graduate program. Her research on in utero food preferences is filtering into the clinical world, making a real difference in maternal diets as a way of understanding (and influencing) infants' taste preferences and ultimately impacting their nutrition across the lifespan. The next generation of researchers and practitioners must be prepared to respond to critical needs in nutrition—and our cross-disciplinary courses, including a major, in nutrition offer just that.

Penn Nursing has been ranked the #1 nursing school in the world for the third consecutive year. These rankings reflect the research, teaching, practice, and



▲ Antonia M. Villarruel PHD RN FAAN
The Margaret Bond Simon
Dean of Nursing

policy impact of our students, alumni, and faculty. We prepare students to be innovators and advocates, and to positively influence health.

In this issue of *Penn Nursing*, the benefits of that education are clear in the story of our alumni, Carrie Tompkins Stricker PHD RN AOCN® and Madelyn Trupkin Herzfeld RN BSN OCN®. Stricker and Herzfeld launched a cancer care management and patient engagement platform that provides patients, cancer care teams, and life sciences companies with access to data and insights to improve the quality of care. Pairing a desire to improve patient care with innovation is making a difference.

Penn Nursing and Hamdi share a humanitarian spirit. And it is precisely that spirit that precipitated the launch of our \$60 million campaign, *Innovating for Life and Living*, in April. Our faculty, students, staff, and alumni have long pioneered solutions to some of society's most vexing issues—thus, “doing well by doing good.” This campaign will ensure we have the resources to continue to be a positive force for the future through innovative science, education, and practice. I hope you will invest in that future with us.

Thank you for your continued commitment to Penn Nursing. I hope you read with pride about our latest efforts to transform health and health care, and I look forward to hearing from you. ❖

Lunch Trucks on a Roll: Hold the Sauce

SOME FOOD HISTORIANS believe that lunch trucks date back to chuck wagons in the old west. Others trace the origins to a nineteenth century Rhode Island sandwich seller. On Penn's campus, the tradition began in the 1940s with soft pretzel and ice cream vendors—and has evolved into a virtual United Nations on wheels, offering everything from Caribbean to African, from soul food to Mexican, from kabobs to crepes, from tofu to cheesesteaks.

“The trucks have become more health conscious,” says Monique Dowd MARDLN CDE CSG, a Penn clinical dietitian and certified diabetes educator. “The fruit trucks provide a mega-dose of nutrients, and a lot of the ethnic trucks offer whole grains and steamed rice, which is healthier than fried rice.”

According to Rick Furstein, leader of “Beyond the Cheesesteak,” a tour of University City food trucks, “You see more diversity these days,” such as halal, kosher, and gluten-free offerings. Many of the vendors are “first- and second-generation immigrants who are bringing their cultures to Penn,” he says. If you frequent a truck, “the people there will begin to recognize you and customize your order. It’s a place to buy food and to connect.”

For value, Furstein recommends breakfast sandwiches. “They use hoagie rolls, so if you order egg and cheese, you get a lot of bread. It’s the best way to get the most for your money.”

Nutrition-wise, when ordering, says Dowd, remember that some trucks use more sauce than is needed. “Get the sauce on the side,” she advises. “Or no sauce at all.” ❖

Carb port: A soft-pretzel vendor sells on Penn's campus circa 1970. >





News



International Nurse Researchers Hall of Famers

Sigma Theta Tau International (STTI) honored two Penn Nursing professors, **Patricia D'Antonio PHD RN FAAN**, the Carol E. Ware Professor in Mental Health Nursing, and **Connie M. Ulrich PHD RN FAAN**, the Lillian S. Brunner Chair in Medical and Surgical Nursing, when they were inducted to the International Nurse Researcher Hall of Fame this summer at the 29th annual International Nursing Research Congress in Melbourne, Australia.

Campaign Focuses on the Future of Policy, Practice, and Discovery

Penn Nursing launched its \$60 million *Innovating for Life and Living* Campaign this spring, as part of the University's overarching *Power of Penn* Campaign. Helping to define the future of policy and practice, the future of research and discovery, and the next generation of Penn Nursing leaders, donors will find singular ways to make an impact in the areas they care about most. “As a Nursing Campaign Co-chair, an Overseer, and a proud alum, I’m excited to be part of this effort to build upon Penn Nursing’s incredible legacy of innovation,” said Krista Pinola Nu’86. “My husband Rich and I are strong supporters of pushing the envelope and taking risks to ensure we continue to be in the vanguard of nursing education and leadership, policy and practice, and research and discovery”.

GNE Demonstration Shows Greater ROI for Medicare

In an article published in the *New England Journal of Medicine*, Penn researchers highlighted a successful new model of cost-effectively training more APRNs to practice community-based primary care and called for national adoption by Medicare. “There are significant economies of scale in organizing education across multiple universities

< Dean Villarruel with Campaign Co-chair and Overseer Krista Pinola (center) and Overseer Chair Andie LaPorte (right).

and practice settings with a single teaching hospital hub,” said **Linda Aiken PHD**, the Claire M. Fagin Leadership Professor in Nursing and Director of CHOPR.

The findings indicate that a shift in Medicare funding from diploma nursing programs that produce entry-level RNs to permanent, national funding of training for APRNs (similar to Medicare's support of clinical residency training for physicians) would allow communities to scale up high quality clinical training for advanced practice nurses in the settings where they are most needed when they graduate. CHOPR and HUP led the largest demonstration site, which included nine universities, multiple health systems, and more than 600 community health care providers around Philadelphia.



Fairman First Nurse to Deliver Garrison Lecture

Penn Nursing’s **Julie Fairman PhD RN FAAN**, the Nightingale Professor in Honor of Nursing Veterans and Chair of the Department of Biobehavioral Health Sciences, was the first nurse to deliver The Garrison Lecture as part of the 91st gathering of the American Association for the History of Medicine (AAHM) in Los Angeles, California. Fairman, a nurse historian, author, and researcher,



Numbers of Note

50

Number of states where alumni live and work

317

Alumni have served as volunteers for Penn Nursing in 2018

28

Number of years the Alumni Liaison Program has run

939

Participants in the Alumni Liaison Program over 28 years

37

Alumni have served as mentors in FY17 and FY18

28

Alumni serve as Deans in higher education

80

Alumni have graduated with a dual-degree from Penn Nursing and Wharton

1900

Attendees at Penn Nursing events and programs in FY18

732

Alumni who volunteer in Penn's undergraduate Interview Program

spoke about nurses who worked in the Civil Rights movement from 1964-1966 in Mississippi. The title of her talk was, "We Went to Mississippi: Nurses and Civil Rights Activism of the mid-1960s."

The Garrison Lecturer is a scholar distinguished for contributions to medical history or other fields of science and learning, who presents original and previously unpublished research in a lecture given at AAHM's annual meeting.



Nationwide Study Examines Care Transitions

Despite the intensity of efforts launched in the past decade to understand how to reduce unnecessary health care utilization, reduce hospital readmissions, and improve patient experience, patients and their family members still experience suboptimal care transitions. However, little is known about what patients and their family caregivers actually experience and desire from this process.

A team of researchers from across the U.S., including Penn Nursing's **Karen Hirschman PHD MSW**, are engaged in a national study—Project ACHIEVE—examining patient and family caregiver experiences and outcomes associated with care transitions through a comprehensive analysis of process at more than 40 hospital sites nationwide. Results from focus groups and interviews conducted with 138 patients and 110 family caregivers from California, Colorado, Kentucky, Louisiana, Pennsylvania, and sites across New England have been published in the *Annals of Family Medicine*.

Findings from this initial phase of the study reveal that accountability, continuity in care, and caring attitudes from the medical staff are important components of care transitions for patients and their family caregivers. When they experience these components, patients and caregivers perceive their care

as excellent. However, when they are not experienced, patients and caregivers may feel unsafe and abandoned.

Consistent Opioid Prescribing Guidelines Needed for Cancer Patients

In a *JAMA Oncology* article, researchers from Penn Nursing and Penn Medicine are calling for key governmental agencies, medical associations, and oncology societies to collaborate on developing more consistent clinical opioid prescribing guidelines for patients with chronic cancer-related pain. Persistent pain and recurrent episodes of pain are common for those who are living with cancer, or for those undergoing cancer treatment. When used properly, prescription opioids have long been known to help combat pain experienced by people with cancer.

Lead-author **Salimah H. Meghani PHD MBE RN FAAN**, Associate Professor of Nursing and Term Chair of Palliative Care at Penn Nursing, calls for key agencies (CDC, NCCN, American Medical Association, American Society of Clinical Oncology) and other organizations to collaborate and resolve inconsistencies in prescribing guidelines. "Competing contemporary guidelines from diverse authoritative agencies and organizations carry the potential to confuse, if not seriously jeopardize, pain management for patients with cancer who are living with moderate to severe pain, adding to an already appalling burden of unrelieved cancer pain," say Meghani and co-authors.

Gerontology Scientist Named New Innovation Fellow

Pamela Cacchione PHD CRNP GNP BC FGSFA AN, the Ralston House Endowed Term Chair in Gerontological Nursing at Penn Nursing and a geriatric nurse scientist at Penn Presbyterian Medical Center (PPMC), has been appointed a 2018-2019 Penn Nursing Innovation Fellow. As an innovation fellow in the Penn Medicine Center for Health Care Innovation (CHCI), Cacchione will engage in multidisciplinary collaborations using innovation and design-thinking to enhance health care delivery and

outcomes. The Fellowship represents an important collaboration between Penn Nursing, CHCI, and the University of Pennsylvania Health System's Department of Nursing.

Not new to health care innovation, particularly within aging populations, Cacchione has collaborated with investigators from Penn Engineering and Penn Medicine on a National Science Foundation-funded grant to develop affordable mobile robots to help with elderly care. Additionally, she and a team of engineering design students recently formed AgingSense and have developed a prototype of heart failure monitoring Smart Socks.

“Nurse Maximizing” Think Tank Addresses Needs of Our Aging Population

Over forty percent of all older adults in the United States are living with four or more chronic illnesses, receive care from a fragmented health care system, and are struggling with rising costs and uneven quality of care. To confront this national crisis, more than fifty health system leaders, policy makers, innovators, and scholars convened in May at Penn Nursing to identify actionable recommendations designed to transform care delivery for older adults with complex health and social needs and support their family caregivers.

Penn Nursing and its NewCourtland Center for Transitions and Health sponsored the two-day, invitation only think tank, Assuring High Value Care for Vulnerable Older Adults and their Caregivers: Maximizing the Contributions of Nurses.

Led by **Mary Naylor PHD RN FAAN**, the Marian S. Ware Professor in

Gerontology, and **Nancy Hodgson PHD RN FAAN**, the Anthony Buividas Term Chair in Gerontology, participants focused on three significant opportunities to achieve high-value care in the next few years: accelerating the use of evidence-based care models; increasing partnerships with health care consumers; and advancing the use of emerging health care innovations. Two high-level recommendations emerged: launch a national dialogue on how to address in our health and social systems what matters to chronically ill older adults and their family caregivers, and facilitate health system transformation and payment and policy changes to support adoption and adaptation of high-value care models.

“We need to stimulate a national conversation that engages the diverse perspectives of all stakeholders, most importantly those of older adults and their family caregivers in telling us what matters most to them,” said Hodgson, who is also an Associate Professor of Nursing.

Pennsylvania Long-Term Care Council Appointment

Gov. Wolf of Pennsylvania appointed Penn Nursing's **Nancy Hodgson PHD RN FAAN**, Anthony Buividas Endowed Term Chair in Gerontology, to his 35-member Long-Term Care Council. The Council makes recommendations to improve the Commonwealth's long-term services and support systems and affords members the opportunity to directly impact the quality of care provided to older adults and persons living with disabilities. Dr. Hodgson's appointment secures nursing and nursing education's representation at the state policy level. ♡



^ Attendees at May 2018's “Nurse Maximizing” Think Tank.

Community & Practice News



Bethesda Project Saving Lives Initiative

As part of a continuing partnership between Penn Medicine, Penn Nursing, and the Bethesda Project, a workshop (funded by Penn Medicine) was held in May to train Bethesda Project staff on naloxone rescue for an opioid overdose. Penn Nursing's

Rosemary Polomano PHD RN FAAN, Associate Dean for Practice, and Bethesda Project's Director of Social Services, **Brandon Trombetta, MSW**, led this intensive two-hour training with featured presenters from Penn Medicine, **Brian D. Work MD MPH**, Assistant Professor of Clinical Medicine, and **Jeanmarie Perrone MD**, Professor of Emergency Medicine. Penn Nursing's, faculty **Ann Marie Hoyt-Brennan MSN RN** and **Deborah Becker PHD ACNP BC CHSE FAAN**, and Prevention Point Philadelphia's **Elvis Costello**, coordinated simulation training in the recognition of signs and symptoms of opioid overdoses and administration of intranasal naloxone. Other Penn Nursing faculty and graduate students trained Bethesda Project staff and volunteers in how to respond to an opioid overdose. Over 50 Bethesda Project staff and volunteers completed the training and over 75 percent of participants reported making moderate to exceptional progress in nine knowledge and competency areas of responding to an opioid overdose.

New Funding Launches West Philadelphia Health Event

A grant from the Trustee's Council of Penn Women will bring a Pap Rally event to West Philadelphia. The Center for Global Women's Health, in collaboration with women in the West Philadelphia community, will conduct a one-day community conference on women's health in January 2019 to coincide with Cervical Health Awareness Month. The goal will be to encourage everyone with a cervix—not just those who identify as women—to get screened for cervical cancer.

Penn Nursing students, who will help organize and administer screenings, will also learn to partner with communities to identify and address health needs, as well as explore how nurses can empower women to become their own advocates in patient-provider relationships.

Developing a Curriculum for Health Professionals

A presentation and discussion with Dr. Pedro Greer, the Professor and Founding Chair at Florida International University of Herbert Wertheim College of Medicine drew a large crowd at Penn this spring. Dr. Greer has led an interprofessional medical education curriculum,

"Neighborhood Health Education Learning Program," that prepares future practitioners to examine and address social determinants that influence health outcomes. This event was made possible by the Year of Innovation grant and the support of Penn Nursing, Penn Center for Public Health Initiatives, Penn SP2, the National Center for Integrated Behavioral Health, Penn Dental, and Penn Medicine.

Students Run Exam Prep Bootcamp for Local High School

As part of *NURS 354 - Addressing the Social Determinants of Health: Community Engagement Immersion*, Penn Nursing juniors Isabel Braun and Morgan Shick spent time each week at Kensington Health Sciences Academy (KHSa) working with teenage students, and together, prepared these students for their final exam. Penn's involvement at KHSa is part of the Penn Futures Project collaboration between Penn Nursing, GSE, and SP2. "*NURS 354* helped me realize that health is not just determined by one single factor. Health is a spectrum, and optimal health is, in my opinion, an unachievable myth.



^ Dean Villarruel with IBX Nursing Interns.

I think that we should focus on a person's ability to function successfully within the context of their environment and conditions, and health care providers (including myself as a future RN) should create an open discussion where patients have the space to discuss their specific needs and concerns," said Isabel.

Dance Marathon Raises Money for CHOP

The student-run Penn Dance Marathon raised \$11,252.40 at their annual 48-hour Dance Marathon event. As the culmination of an awareness campaign for the Children's Hospital of Philadelphia and to support the children of the greater Philadelphia community, this year's money raised will support CHOP's Homeless Health Initiative (HHI)—an organization that provides free health services to women and children living in local emergency housing shelters. Penn Nursing undergraduate Jordan Lindekens, also one of Penn Dance Marathon's six directors, said of the group, "Their energy and enthusiasm to support pediatric health is what brought this event to life."

IBX Nursing Interns

Once again, Penn Nursing students were well represented in the competitive, summer-long

Nursing Internship Program sponsored by Independence Blue Cross and the Independence Blue Cross Foundation. Eight students were awarded internships, with two at the Independence offices and six at community health center clinics throughout Philadelphia. Emily Layne Nu'20 was selected to speak at the culminating recognition event.



Healthier Together

Penn Nursing partnered with Mercy LIFE to host a community discussion around ways to promote the health of the community. This open forum was an opportunity for more than 40 members of the community as well as Penn Nursing faculty **Terri Lipman PHD CRNP FAAN** and **Rebecca Phillips MSN RN** to talk about health issues impacting the health of children, adults, and seniors in West Philadelphia. Attendees asked questions and contributed to the conversation on how to move forward in partnering together to improve the health of the West Philadelphia community. ♦♦



^ Penn Nursing students at KHSa.

Around the Globe



^ Alaina Hall pictured with Penn President, Dr. Amy Gutmann.

Healthy Little Ones

Miacatlán, Mexico

Recent graduate, **Alaina Hall** Nu'18, won one of three 2018 President's Engagement Prizes. Hall's nonprofit project—Healthy Pequeños (Healthy Little Ones)—is a nurse-led multi-interventional health-promotion effort that aims to address the global health problem of infectious disease in children. She will work in partnership with the Nuestros Pequeños Hermanos orphanage in Miacatlán, Mexico to improve health education for children and their caregivers, strengthen infection screening and identification processes, and reduce exposure to infection-causing pathogens by providing filtered water and repairing damage to local sewage structures. She is being mentored by **Cynthia Connolly** PHD RN FAAN, Associate Professor of Nursing.



Cervical Cancer Prevention

Sub-Saharan Africa

Researchers evaluated implementation strategies used to improve the uptake and sustainability of cervical cancer prevention programs in sub-Saharan Africa. The study improves understanding in how to scale up and evaluate new and existing programs and use them to overcome barriers to treatment and prevention for these women. "The necessary evidence and tools for [cervical cancer] prevention exist but are not translating easily into practice and reaching the most vulnerable, at-risk women," said alumna **Lauren G. Johnson** PHD (pictured) lead author of the article published in *Implementation Science*. Co-authors include **Alison M. Buttenheim** PHD MBA, Associate Professor of Nursing and **Anne M. Teitelman** PHD FNP-BC FAANP FAAN, Patricia Bleznak Silverstein and Howard A. Silverstein Endowed Term Chair in Global Women's Health and Associate Professor of Nursing.



WHO Redesignation

PAHO Region

Penn Nursing has been re-designated as a World Health Organization (WHO) Collaborating Center for Nursing and Midwifery Leadership for an additional four-year term. Under the Directorship of **Dean Antonia Villarruel** PHD; Co-director **Eileen Lake** PHD (pictured); and **Nancy Biller** as Associate Director, it seeks to increase workforce capacity to improve maternal health in Latin America.

1988

Year Penn Nursing was first designated as a World Health Organization Collaborating Center for Nursing and Midwifery Leadership

5

Number of Nursing students who participated in Penn's Global Internship Program this summer.

- 1 **Selena Huang** at TASK Applied Science in Cape Town, South Africa
- 2 **Ruth Lee** at the World Medical Association in Ferney-Voltaire, France
- 3 **Jordan Lindekens** at the University of York in York, England
- 4 **Skylar Stowell** at United Helping Hands Nepal in the Kathmandu Valley, Nepal
- 5 **Stephanie Tran Rojas** at the Lien Centre for Social Innovation in Singapore



Interdisciplinary Partnership

Vietnam

A new interdisciplinary global partnership launched between Penn Nursing, Penn's Perelman School of Medicine (PSOM), and the Vingroup to enhance health care and to create new undergraduate and graduate programs in medicine and nursing in Vietnam and the surrounding region. The Vingroup is Vietnam's leading private economic consortium and includes a newly formed private, nonprofit university, VinUni, as well as the country's largest private health system, VinMec. It will operate from a newly formed Center of Engagement in Southeast Asia at PSOM and will be led by Drs. Glen Gaulton, Gail Morrison, and Lee Fleisher for Penn Medicine and by **Julie Sochalski PHD FAAN RN** for Penn Nursing, with a goal to create schools of medicine and nursing at VinUni. It will also seek to enhance graduate education and health care programs with the VinMec Health Care System. On-site training and learning opportunities for faculty and students are anticipated.

Middle Eastern Understanding

Jerusalem, Israel

Encompass, a new fellowship program run out of Penn Hillel, meshed 16 students of diverse religious and ethnic backgrounds on a journey to the Middle East in May. A freshman in the Nursing/Wharton dual degree program, **Thomas Seaman**, said, "The Encompass Fellowship gave me the opportunity to study the Israel/Palestine conflict and travel to see it firsthand in Jerusalem and the West Bank. Through meeting with individuals from both sides and traveling around the country, I feel that I understand the conflict in a more personal way and can share my experiences with others."



Bioethics Abroad

Bangalore, India

Post-doctoral fellow **Cynthia Paidipati** and nurse ethicist, **Connie Ulrich PHDRN FAAN**, Lillian S. Brunner Chair in Medical and Surgical Nursing, will present their work on moral distress, depression, and suicide risk among undergraduate nursing students at the World Congress of Bioethics in Bangalore, India this December.

Have One *on* Us.



At Penn Nursing, we're incredibly proud of our alumni. Our graduates are defining nursing in the 21st century, and improving health in communities here at home and around the world, one innovation at a time.

To show our appreciation, we're giving away a free *Innovating for Life and Living* Campaign travel mug (pictured) to the first 100 Penn Nursing alumni who go to www.nursing.upenn.edu/gogivelead or log in to **QuakerNet** and update at least one of the following before **December 31st, 2018**:

- Email address
- Home address
- Work title
- Employer
- Or activate one of the Go, Give, Lead Penn Engagement badges

That's it. Just be among the first 100 to update at least one of the above records, and we'll send you a complimentary travel mug.

Thank you for all that you do to improve lives in all corners of the globe.



Innovating for Life and Living





Parents Driving Distracted

Catherine McDonald PhD RN FAAN, an assistant professor at both Penn Nursing and Penn Medicine, shares findings from her latest study, “Factors Associated with Cell Phone Use While Driving in a Survey of Parents and Caregivers of Children ages 4-10 Years,” published in *The Journal of Pediatrics*.

WHEN WE THINK about distracted driving much of the focus is, appropriately, placed on teen drivers and cell phones. But what about child passengers driving with a distracted parent or caregiver?

We know from prior research that distracted driving from cell phone use is associated with higher crash risk. The current study, sponsored by the Center for Child Injury Prevention Studies (CChIPS), provides further evidence that parents are driving distracted while their young children are in the car, such as texting or using social media. When parents engage in these behaviors while driving with their children in the car, they are not only placing themselves in dangerous driving situations, but they are also modeling these unsafe behaviors for their children to see.

Distracted Driving and Child Passenger Safety

The 4- to- 10-year-old age range was selected for this study in part because this time period can represent several points of transition in terms of child passenger

Of an online survey to parents and caregivers of children ages 4-10 years, 760 respondents, hailing from 47 US states, indicated they engaged in the following behaviors while driving, and the car was moving, with their child in the vehicle:

52.2 %

talked on a hands-free phone

47 %

talked on a hand-held phone

33.7 %

read text messages

26.7 %

sent text messages

13.7 %

used social media

safety, from a forward-facing child restraint system (CRS) to a booster seat to an adult seat belt. When we asked parents the type of CRS they typically use for their child and about the frequency of using that same type of restraint for each trip, 14.5 percent of parents reported inconsistent use of their typical CRS, which has been established as increasing a child’s risk for injury.

Clustering of Risks

We also found a correlation between parents engaging in other risky driving behaviors whether or not children were present in the car, such as not wearing a seat belt and driving under the influence of alcohol, and cell phone use while driving while their children were in the car. This “clustering of risks” points to an important opportunity to educate parents through well-child visits to their health care provider. When clinicians are discussing child passenger safety with families, they can use the opportunity to ask and educate about parental driving behaviors such as seat belt use and cell phone use while driving.

It is important to note that even parents who did not report engaging in these other risky driving behaviors still used their cell phones while driving. We know people want to stay connected to others as often as possible, and that technology is constantly changing to become more accessible. However, parents should consider that staying off of their cell phones while driving is an important habit to maintain, whether or not their child is in the vehicle. Further research is needed to better understand if observing the distracted driving behaviors of parents influences adolescents when they become young drivers. ❄

A version of this originally appeared on the Center for Injury Research and Prevention (CIRP) at Children’s Hospital of Philadelphia Research in Action blog.

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Policy

Easing Postpartum Conversations

Students work to improve the experience for diverse families

PENN NURSING ASKED *KC Benchimol Nu'14 GNu'18 GNu'19 RN WHNP-BC* and *Monika Wasik C'12 Nu'15 GNu'18 RN-CBC* to walk us through the policy change they spearheaded across postpartum units at the University of Pennsylvania Health System—a simple change that makes it easier for all people to participate in the postpartum experience and symbolizes acceptance of LGBTQ+ parents.

Their Preparation

As students at Penn Nursing, we honed a critical eye that allowed us to identify a simple way to update the paperwork and improve the postpartum experience for diverse families. While our educations gave us the confidence to confront a system in which diverse families were not being appropriately recognized and valued as well as to speak up to implement change, our graduate policy course helped provide us with the tools we needed to connect our proposal to current health care policy.



DEFINITIONS

Cisgender [sis-jen-der]
| adjective (cisgender people)

A term used by some to describe people who are not transgender. "Cis-" is a Latin prefix meaning "on the same side as," and is therefore an antonym of "trans-." A more widely understood way to

describe people who are not transgender is simply to say non-transgender people. **LGBTQ** [el-jee-bee-tee-kyoo] | acronym (LGBTQ people) Acronym for lesbian, gay, bisexual, transgender, and queer. Sometimes, when the Q is seen at the end of LGBT, it can also mean

questioning. LGBT and/or GLBT are also often used.

Transgender [trans-jen-der]
| adjective (transgender people)

An umbrella term for people whose gender identity and/or gender expression differs from what is typically associated with the sex they

were assigned at birth. People under the transgender umbrella may describe themselves using one or more of a wide variety of terms — including transgender. Use the descriptive term preferred by the person. Many transgender people are prescribed hormones

Enforcement is a key part of ensuring inclusive care for LGBTQ+ individuals. Despite being currently challenged, the law protecting patients on the basis of sex still stands in any hospital receiving federal funding, including Medicaid and Medicare. Our primary analysis and working experience utilizing the birth certificate (BC) and social security number (SSN) applications on the postpartum unit revealed that these forms were not appropriate for many LGBTQ+ families. As nurses caring for a diverse patient population, we strive to mitigate discrimination and health disparities, and we aim to include a “broad definition of family,” as defined by the Joint Commission in 2011, within hospitals’ policies and practice. Therefore, our proposed change was to replace the gendered language ‘Mother’ and ‘Father’ on the BC and SSN worksheets with the gender-neutral alternatives, ‘Parent 1’ and ‘Parent 2’.

The Implementation

To implement these changes, we collaborated with nursing leadership on our own unit to create an informal working group. We conducted a thorough literature review of LGBTQ+ experiences in health care to add to the anecdotal support from the patients we cared for to determine the most inclusive terminology alternatives and to ensure we were making an evidence-based intervention. We then contacted leaders across the University of Pennsylvania Health System (UPHS) in addition to the

system’s Medical Record Committee, Operations, Birth Registry Unit, and government agencies for review and appraisal. This effort resulted in a health system-wide change in the language of the Birth Certificate and Social Security worksheets—in English and Spanish—to reflect diverse family structures.

During the implementation process, we informed staff of the change through Unit Council meetings, e-mail, and shift huddles, and provided them with resource tip sheets to assist LGBTQ+ patients in completing the BC and SSN forms. Since implementing the new paperwork system-wide, no families have expressed discomfort or difficulty utilizing the paperwork in a way that applies to their family structure. The change also symbolizes that all family structures are welcome (Benchimol, Wasik & Scalise, 2018).

Furthering Change

We also provided a framework for a more national change to not just BC and SSN papers, but to all forms and documentation within the gender-exclusive ‘Women’s Health’ arena. We presented on our project at the Association for Women’s Health, Obstetric, and Neonatal Nurses (AWHONN) Annual Convention, where we shared our policy changes and provided handouts to guide nurses, providers, and hospital stakeholders in implementing gender neutral paperwork in their own hospitals.

Amending the paperwork terminology is an effective way to include LGBTQ+ families within the hospital system, but it also exposes the need for continued evaluation of all clinical paperwork and gendered terminology usage in the postpartum setting, and the sustained need for more research about best practice care for childbearing LGBTQ+ individuals and their families (Benchimol, Wasik & Scalise, 2018). ❄️



Our educations gave us the confidence to confront a system in which diverse families were not being appropriately recognized and valued.

Plans for the Future

- Continue to advocate for removing gendered language from the EPIC electronic health record
- Implement gender neutral ‘crib cards’
- Create a policy for non-gestational parents to provide human milk

Tips for Implementation

1. When creating new paperwork and designing resources for your unit, be aware of gendered language and evaluate its necessity.
2. Seek management buy-in and involve people from the LGBTQ+ community in any changes made.
3. Collect data from patients, even informally, via surveys or error-reporting systems.
4. Know your state’s laws and legal protections for LGBTQ+ persons and families.
5. Know resources in your area to refer your patients.

Resources

1. Human Rights Campaign State Equality Index (state scorecards) www.hrc.org/campaigns/state-equality-index
2. RAD Remedy LGBTQ+ Resources www.radremedy.org
3. American Civil Liberties Union www.aclu.org
4. Your local LGBT Center or LGBT Health Center

Additional citation:

The Joint Commission. (2011). Advancing Effective Communication, Cultural Competence, and Patient-and-Family Centered Care for the Lesbian, Gay, Bisexual, and Transgender (LGBT) Community: A Field Guide. Retrieved July 23, 2018, from <https://www.jointcommission.org/assets/1/18/LGBTFieldGuide.pdf>.

by their doctors to bring their bodies into alignment with their gender identity. Some undergo surgery as well. But not all transgender people can or will take those steps, and a transgender identity is not dependent upon physical appearance or medical procedures.

Gender non-conforming

[jen-der nohn-kuh n-fawrm-ing] | *adjective (gender non-conforming people)*

A term used to describe some people whose gender expression is different from conventional expectations of masculinity and femininity. Not all gender

non-conforming people identify as transgender; nor are all transgender people gender non-conforming. Many people have gender expressions that are not entirely conventional – that fact alone does not make them transgender. Many transgender men and women have gender

expressions that are conventionally masculine or feminine. Simply being transgender does not make someone gender non-conforming. The term is not a synonym for transgender or transsexual and should only be used if someone self-identifies as gender non-conforming.

Discovery & Innovation

Strengthening Bonds in Cancer Care

A startup founded by Penn Nursing grads uses data to improve care management.

CAREVIVE, A CANCER CARE management and patient engagement platform that provides patients, cancer care teams, and life sciences companies with access to data and insights to improve the quality of care, was founded in 2013 by Penn Nursing graduates Carrie Tompkins Stricker PHD RN AOCN® and Madelyn Trupkin Herzfeld RN BSN OCN®. It is headquartered in North Miami, Florida and employs a staff of fifty.

Recently, *Penn Nursing* got on the phone with Carrie and Maddy for a far-reaching conversation about innovations in cancer patient care management, Carevive’s niche and, of course, the Penn Nursing connection. What follows is a condensed version of that talk.

Penn Nursing:

What’s the story behind Carevive’s founding and what role did Penn Nursing play?

Carrie:

Maddy and I didn’t meet at Penn. After completing my Master’s degree I began a clinical practice at Abramson Cancer Center, then went on to conduct research and graduated from Penn Nursing with my PhD in 2007. While I was doing that, Maddy was founding her first company. Maddy needed expert advice on a breast cancer project and reached out to Dr. Linda Aiken, a professor we both knew.

She said, “You have to talk to Carrie!” For a decade, I served as an expert advisor to Maddy and her company. After Maddy sold her first company, we started talking in 2011 about the next best idea. One of the things I love about cofounding this business is that we came from different paths at Penn Nursing. Maddy did her undergraduate in nursing and business [earning dual degrees from Wharton and Nursing]. We had different arcs in our careers, and then came together around a disruptive technology. Penn Nursing gave us that critical foundation of knowledge and education that enabled us to work together from two different perspectives.

PN:

What does the platform look like? How does it differ from old-school models of cancer patient care?

Maddy:

The Carevive platform has been designed with the end-user in mind, and as such has a different look and feel for the patient, the cancer care team, and administrators. If you’re a clinician, you see a dashboard that summarizes both patient-reported and clinical data that is just what you need to make patient-centered care decisions. For example, we display how fit or frail the patient is to help inform decisions about how aggressive therapy could be. Another tool looks at patient preferences and how this informs choice among evidence-based treatment options. For patients, there are electronic survey tools for them to complete: What does the patient want? What are their goals for care? Does the patient know if treatment is curative or palliative? We ask patients very targeted questions that show up on the clinician’s dashboard. The patient’s voice is absent from the old-school model. Patients

may assume the goal is to be cured when in some instances, that’s not possible. Clinicians may assume the patient wants the most aggressive care possible, but not all patients do. Some will value quality of life more than the treatments that may have high cost or high toxicity. [With Carevive] the clinicians see that data, and we know that they use the data in their decision-making process, and the patients leave with an electronic and/or hard copy of an individualized [Carevive] treatment care plan for them and their families. Then, if their cancer is not metastatic, they get a survivorship plan when their treatment is finished, which guides the patient as they transition back to primary care.

Where we know we are going to be the most innovative is in cancer symptom management. Patients may be on a regimen that could result in 60-70 side effects. There is currently no systematic way for clinicians to proactively assess and manage them. In fact, recent research shows clinicians are unaware of 50 percent of patient symptoms. At Carevive, we are working to enable cancer teams to systematically and proactively identify and manage patient-reported symptoms. These data then enable us to provide insights on real-world cancer patient experiences



Penn Nursing gave us that critical foundation of knowledge and education that enabled us to work together from two different perspectives.

at a population level to enable providers to improve care delivery, and life science companies to inform drug development.

Carrie:

I agree. The core difference that Carevive enables is systematic integration of the patient voice into care and decision-making processes across the cancer continuum, from diagnosis, through treatment, all the way to survivorship and end-of-life. There was previously never a systematic way for clinicians to capture this information in a way that would be scalable in their busy clinics. We apply science and best practices to ensure this is done in an evidence-based and scalable way, and then give patients the tools, care plans for example, to be active partners in their own care.

PN:

What's the biggest barrier to cancer patient care that Carevive innovates to overcome?

Carrie:

Quite frankly, time. Clinicians often don't have the time in these busy clinics, with all the administrative requirements, to go as deep, to listen as long, as what they wish. So we help them focus right in on what's important to the patient at that point in care by systematizing what patients are directly asked, which, as Maddy said, enables more honest insights. Also, clinicians may not be able to keep up with all the knowledge of what are the right questions to ask; for example, as new treatment side effect profiles emerge. We make sure clinicians get the information needed to provide the most proactive, patient-centered care that improves clinical outcomes, without more clinician burden.

PN:

What's an example of how Carevive innovates with survivorship care planning?

Carrie:

In 2012, the American College of Surgeons Commission on Cancer (CoC) mandated giving a survivorship care plan to every patient who received curative treatment—a roadmap for the path ahead. What does follow-up look like? What are your resources? How can you prevent and deal with lasting side effects? This came out of an IOM [Institute of Medicine] report focusing



^ Patient engagers: Carevive co-founders Madelyn Trupkin Herzfeld Nu'96 W'96 and Carrie Tompkins Stricker GNu'98 GR'07.

on survivorship. At Penn we were implementing this into practice—and Maddy and I started talking about innovating the approach to survivorship care plan delivery. What led to Carevive was that we recognized together that integrating the patient voice into survivorship plan delivery was a key innovation that no one was focusing on at the time, nor one that the CoC required. We quickly saw the value of doing this across the whole cancer journey.

PN:

The Carevive website mentions Maddy's very personal connection to cancer.

Maddy:

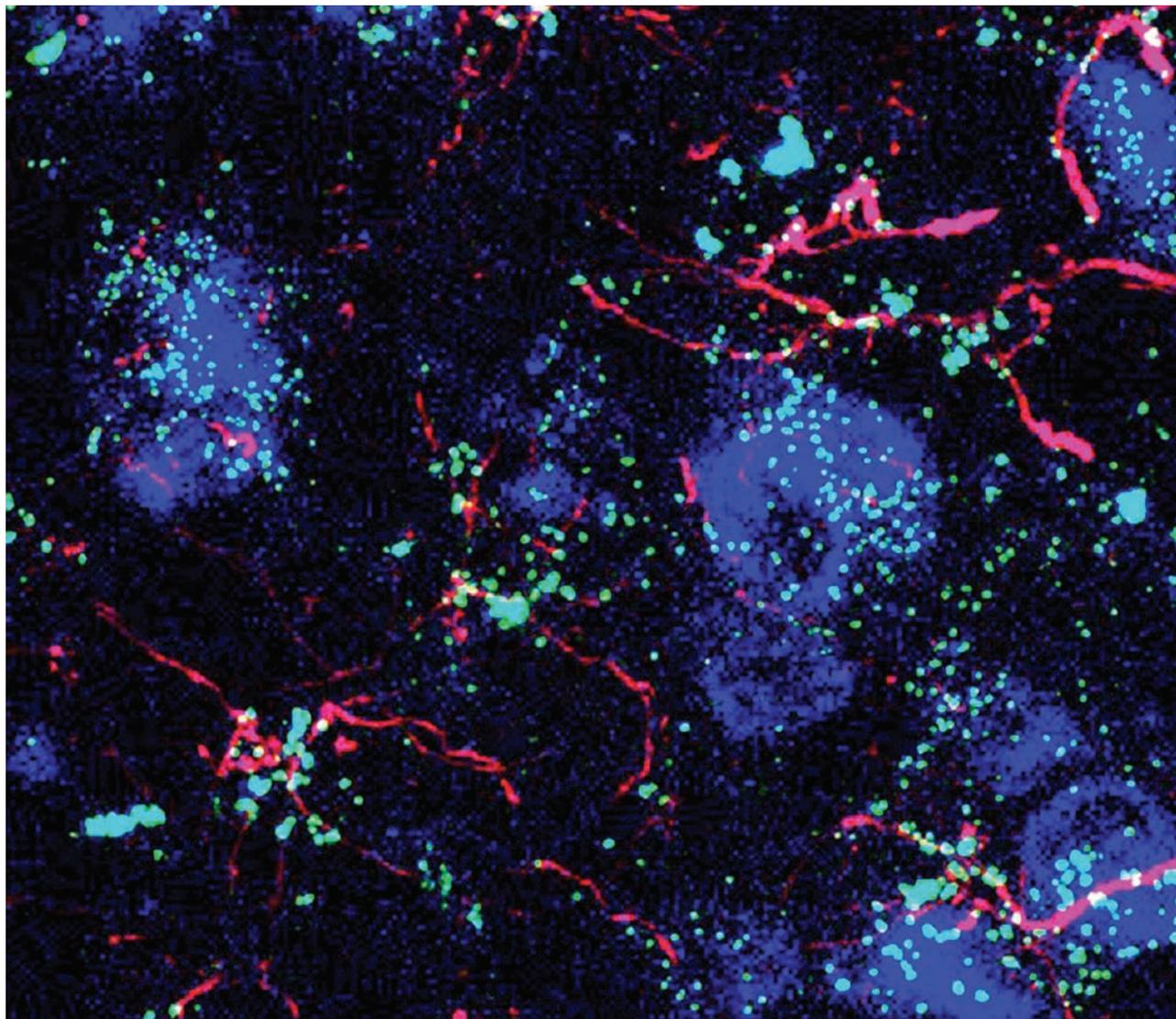
I remember when I first started the business a physician said to me, "A piece of paper doesn't really change anything." That's true. It doesn't change the odds. But we enable clinicians to know their patients better. There's nothing more sacred than the relationship between an oncology team and a patient. So we will do anything to protect and strengthen that provider/patient partnership that leads to improved outcomes.

PN:

On the Carevive web site, Carrie's bio says to ask her about the Carevive Diary.

Carrie:

[Laughing.] I thought I worked hard when I was working full time and getting my PhD. There is no comparison to how hard you work at a startup, and how flexible you have to be! And you have to laugh, you have to be able to look at yourself—and yourselves as a team—and go "Oh my God! How could I do that?" [The Carevive Diary features posts such as] a text from my husband: "Did you mean to throw your PJ's in the toilet?" after I dashed out of the house for an important meeting, or this email about care plan content: "OK, constipation is now in your box and after speaking with Drace I believe you have everything but diarrhea," and discovering a deadline extension on submitting a \$1.5 million grant to the National Cancer Institute—I have a picture of grown men on the team hugging one another. It's the highs and lows and craziness of running a startup. Keeping morale high and keeping humor on the table is so vital in this environment. ❖



Battling Addiction with a New Weapon

Could the hormonal link between food-seeking and drug-taking offer an answer to cocaine relapse rates? By Michelle Berger

COCAINE AND OTHER drugs of abuse hijack the natural reward circuits in the brain. In part, that's why it's so hard to quit using these substances. Moreover, relapse rates hover between 40 and 60 percent, similar to rates for other chronic conditions like hypertension and type 1 diabetes.

Penn behavioral pharmacologist and neuroscientist Heath Schmidt PhD looks at how long-term exposure to

drugs such as cocaine, nicotine, and prescription opioids affects the brain and how these changes promote relapse in someone who has kicked the habit. Two recent papers, published in *Neuropsychopharmacology* and *Addiction Biology*, investigated a novel treatment for cocaine addiction, something that touches 900,000 people in the United States annually.

Schmidt, associate professor of nursing at Penn Nursing and assistant

professor of psychiatry at the Perelman School of Medicine, studies the effects of drug addiction on the brain.

"As a basic scientist I'm interested in how the brain functions during periods of abstinence from cocaine and other drugs and how neuro-adaptations in the brain promote relapse back to chronic drug taking," he explains. "From the clinicians' perspective, they're looking for medications to try to prevent relapse. Our goal as basic scientists is to use animal models of relapse to identify novel medications to treat cocaine addiction."

Schmidt and colleagues from Penn Nursing and Penn Medicine had hypothesized that the neural mechanisms and neural circuits in the brain that play a role in food-seeking might overlap with those key to drug-taking. Through

several experiments, they discovered that drugs that activate receptors for glucagon-like peptide 1 (GLP-1), a hormone that reduces food intake and blood glucose levels, could actually decrease the desire to seek out cocaine. What's more, there are several FDA-approved medications used to treat diabetes and obesity that already target GLP-1 receptors.

"One of the first questions we had—and we were really just kind of curious—was, does cocaine at all affect circulating levels of metabolic factors like leptin, insulin, GLP-1 that have been shown to regulate food intake?" says Schmidt, whose primary appointment is in the School of Nursing.

The research team got its answer from a simple experiment with a rat animal model: Blood drawn after 21 days of cocaine intake revealed decreased levels of the GLP-1 hormone. Though the primary cells that synthesize and release this hormone are found in the small intestine, there's also a source in the brain called the nucleus tractus solitarius.

"Knowing all of this got us interested in GLP-1," Schmidt says. "Does it actually play a role in modulating cocaine-mediated behaviors?"

From there, the research team homed in on GLP-1 receptors and the drugs that activate them, what are known as receptor agonists. To test the efficacy of the medications in question, Schmidt and colleagues used an animal model of relapse with rats. For a three-week period, the rats could press a lever for intravenous infusions of cocaine as frequently as they desired. On average, the animals self-administered 28 infusions of cocaine each day.

The scientists then swapped out the cocaine for saline, leading to a period of withdrawal. Lever-pressing rates dropped significantly.

"At that point, we considered drug-taking to be extinguished," Schmidt

A view of the ventral tegmental area (VTA), a brain region known to play an important role in drug-seeking behavior. The green fluorescence indicates the GLP-1 receptor agonist exendin-4 that has penetrated the brain and distributed to the VTA. Exendin-4 binds putative GLP-1 receptors located on neurons (blue fluorescence) and astrocytes (red fluorescence).

says. "We then reinstated drug-seeking by re-exposing the rats to the drug itself or to cues paired with the drug during the self-administration phase, like a light that comes on when the lever gets pressed."

Once again rats depressed the lever at high rates, an indication that they were seeking the drug—akin to relapse in a human who is addicted.

The researchers next pretreated the animals with one of the FDA-approved drugs intended for diabetes and obesity treatment, Exendin-4, to determine whether it might reduce or altogether block cocaine-seeking. Results showed a significant decrease in drug-craving and seeking, both after an acute injection of cocaine and from re-exposure to environmental cues during withdrawal.

"This tells us Exendin-4 can block the effects of cocaine itself but also condition stimuli previously paired with cocaine," Schmidt notes. "This was really exciting because it's the first demonstration that the GLP-1 system, and the drugs that target this system, could potentially play an important role in cocaine seeking and relapse. The other really interesting aspect of these studies are the doses."

GLP-1 receptor agonists are known to cause nausea and vomiting at pretty high rates in diabetic and obese patients who use them, so Schmidt and colleagues wanted to ensure that the reason for a decrease in cocaine-seeking wasn't from animals being sick. They identified doses that both reduced cocaine-seeking and did not produce adverse effects. A follow-up experiment that infused the GLP-1 agonist directly into the brain replicated the findings. Taken together, these findings indicate that low doses of a GLP-1 receptor agonist can selectively reduce cocaine-seeking without causing nausea.

As a final step, the researchers isolated the brain pathway able to boost GLP-1 signaling, by using a fluorescent dye to track where the drugs actually went in the body after they were administered.

"With these two papers, we've

shown for the first time that central GLP-1 signaling plays an important role in cocaine-seeking," Schmidt explains. "We've identified systematic and intra-cranial doses of GLP-1 receptor agonists that reduce cocaine-seeking and don't produce adverse effects, and we think that if you increase GLP-1 signaling in the brain in general, you can reduce cocaine-seeking in rats and, potentially, craving-induced relapse in humans." To begin testing this, Schmidt's team is collaborating with researchers at Yale University to screen the efficacy of these drugs in a population of humans addicted to cocaine.

Beyond that, Schmidt says he's hopeful these results have potential for drugs of abuse beyond cocaine, too. However, he adds, much more research is needed before this can be stated conclusively. "There is a lot we don't know about the GLP-1 system in the brain," he says. "What is the exact circuitry in the brain? Is this signaling the same as what mediates food intake or is it slightly different? Does cocaine change it in any way? We're working on that." ❖

Michele Berger is a science news officer at the University of Pennsylvania and has been writing about science, the environment, and sustainable living for 15 years. A version of this piece originally appeared in Penn Today.

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Funding for the research published in *Addiction Biology* was supported by National Institutes of Health/National Institute on Drug Abuse grants R01 DA037897, K01 DA031747, and R01 DA041513.



What is the exact circuitry in the brain? Is this signaling the same as what mediates food intake or is it slightly different? Does cocaine change it in any way?

Thanks to advances in genetics, biochemistry, and behavioral studies, a field long considered a secondary science is getting its due. And Penn Nursing faculty and students are taking the lead. **By Jay Heinrichs**

THE RISE OF NUTRITION

NUTRITION LIES AT the intersection of nursing science and clinical work, behavior, and medicine, and nurses are literally close to the subject. As Penn Nursing lecturer Kerry Shields MSN RN PCCNP says, “If they’re not eating, we’re feeding.”

Yet most Americans are understandably confused about what constitutes the ideal diet for a family.

Add health issues, time constraints, food ability and affordability, and such factors as culture and personal identity, and the complexity of nutrition can become overwhelming even for well-informed patients. Yet, health care professionals have traditionally been given relatively little education in the science.

Penn Nursing is working to close the health care gap by elevating nutrition’s profile as a leading health science. Working with colleagues throughout the University of Pennsylvania,

Nursing faculty and students are pioneering in research that ranges from community health and food availability to studies of gut flora to neuroscience that allows chemo patients to maintain their appetites. “The common thread in human nutrition is food, people, health,” says Karen Glanz PHD MPH, George A. Weiss University PIK Professor. She notes that it covers a wide range of health, from human, therapeutic, and community nutrition to nutritional epidemiology.

Nutrition is anything but a one-size-fits-all science. As the old saying goes, one person’s food is another’s poison. Getting a particular patient to eat healthfully depends on a host of factors, starting with taste preferences developed as early as in utero.

And so, as with any good meal, we probably should begin at the beginning.



MATERNITY: Tasting Womb

A MOTHER WHO wants a child to eat vegetables might start early—very early. “We have good evidence that the child will develop flavor preferences based on the maternal diet,” says Kimberly Kovach Trout PHD CNM APRN FACNM, assistant professor of women’s health and director of the nurse-midwifery graduate program. Noting that the sense of smell contributes 90 percent of flavor, she points out that odor molecules can travel through amniotic fluid. These molecules not only introduce sensations to the fetus; they can also implant a memory. “We have known for a long time that there’s a link between odor and memory,” Dr. Trout says. “Think Proust in classic literature and the memories evoked by the aroma of madeleine cookies.” Women who undergo amniocentesis after eating garlic have amniotic fluid with a detectable garlic odor. What’s more, infants in utero can detect it. They increase their swallowing when sugar is injected into the amniotic fluid; bitter substances make them swallow less. On the other hand, one study showed that mothers who drank carrot juice in pregnancy had babies accept carrots more readily when they were introduced to solid food. The randomized study videotaped the infants’ expressions; those whose mothers had drunk only water and no carrot juice throughout pregnancy made “yuck” faces more often when confronting their first carrots. “What really stunned me was how few clinicians who work with



Can Policy Make America Eat Better?

WE ASKED PENN Nursing nutrition faculty to propose changes in federal nutrition policy that might make Americans healthier. Here are a few of their suggestions.

Monique Dowd: Treat the SNAP (food stamps) program like WIC (Special Supplemental Nutrition Program for Women, Infants

& Children). This may be an unrealistic request, but children should not be fed on soda and other empty-calorie foods. WIC offers only nutritious foods, and SNAP should, too. On the other hand, SNAP forbids ready-prepared food. I think it should allow nutritious foods that are processed to a degree.

Diane Spatz: WIC is the largest purchaser of infant formula in America.

The government should be encouraging mothers in the WIC program (almost half of mothers in this country) to breastfeed. At the same time, make it easier for mothers to breastfeed. Give universal support for break time for women paid by the hour. Offer multiple home visits from a nurse midwife after birth. In Australia, you get five home visits from a nurse midwife. We’re lucky to get one in the U.S.

Ariana Chao: Several things need to happen: (a) Educate more providers in nutrition. (b) Provide more insurance coverage of behavioral and pharmacological treatment for obesity. (c) Decrease prices on fruits and vegetables by encouraging farmers to grow more of them. (d) More grocery stores. (e) Decrease sugar in beverages. (f) Increase availability of school lunches. (g) More areas where people can exercise.

pregnant women know about this,” Dr. Trout says. She surveyed maternity care staff at a leading teaching hospital and found that 90 percent of the clinicians were unaware of the influence of a maternal diet on infants’ flavor preferences.

CONCLUSION: “Start with in utero preferences,” Dr. Trout says. “You’re more likely to eat the foods you’re exposed to. Part of my mission is to tell clinicians about prenatal and postnatal flavor learning so they can tell their clients.”

INFANCY: Humans Feed Humans

“THINK OF BREASTFEEDING as a kind of programming,” says Diane Spatz PHD RN-BC FAAN, professor of perinatal nursing and the Helen M. Shearer Term Professor of Nutrition. “Every day a mom is breastfeeding, her milk tastes different, exposing her baby to different tastes. This sets up healthy lifestyle habits.” Formula, on the other hand, has a monotone flavor, offering little in the way of a taste education for an infant.

But of course breast milk contributes far more than increasing the odds of an unpicky eater. A mother naturally tailors macronutrients—proteins, fats, carbohydrates—to her baby’s needs. Human growth hormones in mother’s milk enable tissues to grow appropriately, and may even help prevent lung problems. (Lungs do not fully grow until age eight.) The protein lactoferrin attacks a variety of bacteria and fungi. A breastfed baby is more likely to have a larger brain mass and a smaller BMI. “When the baby is at the breast,” Dr. Spatz says, “the baby regulates how much he needs to take in. When full, he falls off and falls asleep. With formula, the mother is going to try and keep pumping milk into the baby.” Then there are the immunobiological components, including antibodies, along with antioxidants that protect the baby’s eyes, lungs, and brain.

Dr. Spatz says that babies should get human milk exclusively for the first six months. After six months, the mother can introduce complementary foods. How long should breastfeeding continue? American position statements say sixth months to a year or more; authorities in some nations recommend two

years or more. “We don’t see a lot of women breastfeeding infants beyond a year in America, because many women don’t even get to six months,” she says. “There’s no sense of urgency during the first two weeks in developing the milk supply.” Besides, women often have to get back to work or school, with little support in the transition. The Children’s Hospital of Pennsylvania is an exception. “We have a very comprehensive employee program at CHOP,” she says. Almost 80 percent of new mothers employed at the hospital breastfeed for six months, with a fifth lasting more than a year. “If we spent more time helping moms meet their goals for the first six months, everybody would be breastfeeding for two years,” she asserts. “It doesn’t get harder; it gets more enjoyable. Many mothers tell me they don’t want to stop.” She notes a paucity of literature about mothers who breastfeed beyond a year—or, for that matter, about tandem breastfeeding with an older sibling and a baby simultaneously.

“Human milk can literally make the difference between life and death,” she says. Take necrotizing enterocolitis; for a baby born critically ill, human milk reduces the likelihood of NEC by 77 percent. The odds of late onset sepsis also get reduced significantly. An ill or preterm baby fed human milk tends to get off IV nutrition more quickly, which in turn reduces the odds of complications, infection, and liver damage.

“You have to think of human milk as a medical intervention that’s as important as a ventilator—a medical necessity,” Dr. Spatz says. “But there’s a laissez-faire attitude toward milk supply” among many clinicians. She says a mother should begin expressing with a hospital grade pump within the first hour, “even after a Caesarian.” This is standard procedure at the Children’s Hospital of Pennsylvania. “At CHOP, we roll the equipment into the operating room immediately after the operation.” She adds: “I can tell you from my experience with CHOP along with research studies and work I’ve done internationally, if we spent more time helping mothers breastfeed in the first two weeks, we would solve most of the world’s breastfeeding problems.”

CONCLUSION: The most critical period of breastfeeding happens in the first two weeks after birth.

CHILDHOOD: Vegging Out

THE GOOD NEWS: “It’s never too late” to get a toddler to eat a good diet,” says Kimberly Trout. The bad news: on any given day, according to a large survey, 25 to 30 percent of toddlers eat no fruits, and 20 to 25 percent consume no vegetables. “Repeated exposure to different healthy foods can make a difference,” Trout says.

Associate Professor Tanja Kral PHD agrees. “Food neophobia—fear of trying new foods—is one aspect of fussy eating behavior. But picky eating and food neophobia tend to decline with age. Exposing the child to a vegetable 12 to 15 times can increase their liking.” Dr. Kral adds that parents should be advised to offer kids multiple vegetable side dishes. “This gives them ownership in what they’re choosing, and can increase intake of a vegetable,” she says.

Still, picky eating can form a complex science all its own. Dr. Kral has studied sibling behaviors, in which family dynamics play a role in who eats what. Parents modeling healthy eating can help nurture healthy eaters. In addition, the home environment—what parents bring from the grocery store or fast-food restaurants—makes a difference. “How a parent presents a meal, the sizes of plates, cups, and utensils, all can determine how much a child eats,” she says.

For children, “you have to pull in where they are developmentally,” says Sharon Irving PHD CRNP FCCM FAAN, assistant professor of pediatric nursing. Toddlers, for instance, have finished the greatest growth period of their lives. Babies double or triple their weight in the first 12 to 14 months; that acceleration slows about the same time children start consuming solid food for most of their diet. “People with toddlers say, ‘He won’t eat.’ I say that’s their job,” Dr. Irving says. “They eat on the run, not on a schedule.”



We have good evidence that the child will develop flavor preferences based on the maternal diet.

The child's weight status becomes a big factor for health care professionals, especially when she has overweight or obesity. "The food environment in the home is especially important" in this case, says Dr. Kral. Have a bowl of fruit available, while leaving chips or cookies as an occasional treat. During meals, try decreasing the size of the entrée while offering two vegetables and one fruit as side dishes. Dr. Kral conducted one study in which children offered a larger portion of unsweetened apple sauce as part of a pasta meal ate 40 percent more of the apple sauce and less of the pasta. On the other hand, increasing the portion size of vegetables did not increase their intake. Still, the pasta itself can be made healthier, by mixing in vegetables, changing the sauce, and lowering the caloric content. Given the right food environment, Dr. Kral says, most children should do fine: "Studies have found that when children are born, they have an innate ability to regulate their intake." Not all, though. Genetics can come in to play, with obesity requiring

a clinical care team. Then there is the obesogenic environment, which can disrupt satiety control.

An old New England tale illustrates the phenomenon: when a poor woman was asked how she managed to feed her eight children, she replied, "I cook what they don't like and give them as much as they want." Actually, sensory specific satiety works with likeable food as well. When a child—or an adult for that matter—consumes a meal, the pleasantness of taste declines to the point where he stops eating, even before feeling full. He's sated, in other words, because his senses are no longer fully stimulated. This is why we tend to eat more at a buffet; the variety of foods keeps us from sensory-specific satiety. The secret is to increase variety through fruits and vegetables, not cookies and ice cream.

CONCLUSION: Advise parents to think of food not just as a meal but as an environment, offering a choice of fruits and vegetables and saving salty, fatty, and sugary foods as treats.

OBESE TEENS AND ADULTS: You're Not What You Eat

THE TWO MOST rapid periods of human growth are infancy and puberty. When it comes to an adolescent with obesity, the challenge is to control calorie consumption while ensuring that the patient is getting adequate nutrition. On top of that, teens "are in this space of semi-autonomy, where the family should be involved in weight management," says Assistant Professor Ariana Chao PHD CRNP. "Navigating that dynamic can be challenging." The stakes are high; four out of five obese teens continue to be obese into adulthood. Only one medication has been approved by the FDA for weight management in youth. Orlistat, a reversible gastrointestinal lipase inhibitor, limits absorption of dietary fat. A more common treatment is behavioral counseling. The



U.S. Preventive Services Task Force recommends at least 26 hours of counseling per patient.

“When I help patients, I try to counsel them that weight doesn’t define their self-worth,” Dr. Chao says. “A lot of factors influence their weight, such as genetics and environment. Some of the conversation is helping people not to feel a failure if they gain weight and encourage them to continue to make healthy lifestyle changes.” On the other hand, she adds, “there isn’t a magic pill when it comes to nutrition. It takes time and effort to make healthy lifestyle changes.”

What about diet? Would the diabetic diet help obese patients—adults as well as adolescents? “In 2018, there is no such thing as one diet for people with diabetes,” says Kimberly Trout. “We have largely gone away from rigid prescriptions,” she explains. Some recent research suggests that certain individuals may be able to eat slightly more carbohydrates than in the traditional diabetic diets, so long as those carbs are complex. Certain foods will cause some women to experience a spike in blood sugar while other women show no change—despite taking into account factors such as the glycemic index.

All of which does not mean a clinical nurse can have nothing to say to a patient about diet. “The studies clearly head toward calorie, carbohydrate and portion control for type 2’s,” says Dr. Trout. She points out that the American Diabetes Association’s 2018 clinical guidelines recommend both the Mediterranean and the DASH diets. DASH (Dietary Approaches to Stop Hypertension), promoted by the NIH’s Heart, Lung & Blood Institute, is rich in fruits and vegetables, supports low-fat dairy intake, and limits sodium. Besides lowering hypertension even in patients who failed to lose weight, the DASH diet reduces hypertension disorders among pregnant women, according to Professor of Nutrition Sciences Charlene Compher PHD RD CNSC LDN FADA FASPEN.

When it comes to dietary behavior, though, the key is mindfulness, notes Dr. Chao. Perhaps one of the greatest diets of all is the legendary Poet’s Diet. As the story goes, an obese poet visits his doctor, who tells the man he will die unless he can control his caloric intake. “I’ve tried every diet,” the poet replies. “Nothing works for me.” The doctor tells him to forget the diets he has heard of,

and tells him instead simply to write down every single thing he eats that month. The poet goes home, instinctively grabs a bag of potato chips...and pauses. Does this poet really want the first line to be potato chips? He’s a poet. First lines count. He agonizes for hours on the perfect first line of food, and chooses a carrot and a perfectly ripe, glistening peach. Then he ponders for the next few hours on the second line—the food that will continue his manuscript for the next month. By the time he comes back to the doctor, he has lost impressive weight.

CONCLUSION: What’s good for many obese and diabetic patients—namely, a diet with plenty of fruits and vegetables and low in saturated fats—is generally good for healthy adults.

THE SCIENCE: Food at the Molecular Level

“WHEN I STARTED clinical practice many years ago,” Dr. Compher says, “I used to have to try to sell people on the importance of nutrition. I don’t have to do that anymore. Biology keeps drilling down and finding relationships between nutrients and health in every direction.” Then there is the burgeoning field of epigenetics, showing how genes can be modified with vitamin intake. “It’s a field that has taken off in the past ten years,” Dr. Compher says. “I will be watching that area avidly for just how it is that nutrient intake can affect gene transcription throughout the whole body.” Add to epigenetics the research being done at Penn and elsewhere on precision nutrition, which promises to enable practitioners to personalize a diet according to the patient’s genetic makeup. Algorithms are being devised to predict an individual’s blood sugar level after a meal. Other researchers are studying metabolic pathways and the gut microbiome (see page 30).

Even neuroscience is entering the picture. Associate Professor Bart De Jonghe PHD, associate director of nutrition science programs, is studying the signals in the brain associated with appetite, nausea, and vomiting. “These are complex neurobiological systems,” he says. “If you’re eating a Thanksgiving dinner and you’re full, feeling bloated, that’s a different sensation from feeling nausea from food poisoning at three a.m.”

Nutrition faculty and their research



BART DE JONGHE

PHD

Associate Director,
Nutrition Science Programs

CURRENT AREA OF RESEARCH

Desirable outcomes of drug therapy, with a focus on appetite loss, nausea, and vomiting. Conducts animal studies to examine the health outcomes of fasting before surgery.

“

I grew up hearing the side effects in every commercial for every drug, and thinking, ‘This isn’t a problem?’”



KIMBERLY TROUT

PHD CNM APRN

Assistant Professor, Women’s
Health; Director, Nurse-Midwifery
Graduate Program

CURRENT AREA OF RESEARCH

Gestational diabetes.

“

The enlarging placenta secretes hormones causing insulin resistance, as well as inflammatory cytokines. Among women whose bodies don’t respond with a sufficient surge of insulin, we can recover issues in terms of glucose metabolism. How can you prevent women from becoming diabetic within ten years of giving birth? Besides losing weight, we’ve found that ▶



Dr. De Jonghe and his colleagues have been working to disentangle that neurobiology, identifying various areas of the brain that are anatomically and chemically connected to control these behaviors. The research shows promise for cancer patients suffering from nausea and from the metallic taste many get from chemo. “You can selectively deliver drugs to the brain post-chemotherapy,” he says. “And you can isolate the brain area that’s dramatically activated by a drug that causes nausea or vomiting, and block chemical transmission between those sites.” He is currently experimenting with a diabetes drug developed by a collaborator, which attaches B-12 to the formula. The vitamin prevents entry of the drug into the brain, reducing nausea almost 80 percent while maintaining the hypoglycemic profile. “I believe that, ideally, no drug should have any side effects,” he says. “Every drug should do what it’s supposed to do, and exactly nothing else. I’m optimistic about designing next-generation drugs that come close to this standard—that are better tolerated by patients.”

Biochemical and genetic research in nutrition has obvious utility in intravenous feeding, a specialization of Dr. Compher’s. “We know that what we give patients has to be the same type of nutrients that they need in their bloodstream,” she says. “If you ate a hamburger today, you would digest it and break it down into amino and fatty acids; you’d break the bun down for the glucose; and there would be micronutrients. All that would enter into your system.” If a chunk of hamburger got introduced directly into your bloodstream, on the other hand, “you’d have an allergic reaction,” she says. To complicate matters, Dr. Compher and her colleagues—including a nurse clinical specialist, an NP, and a physician—work with patients with severe Crohn’s disease, which is on the increase both in the U.S. and globally. “It’s a disorder associated with genetic risk,” she says. “But there’s also



Biology keeps drilling down and finding relationships between nutrients and health in every direction.

an environmental feature, dysbiosis, an abnormal response to bacteria in the G.I. tract,” she says. “It’s possible that our modern diet is partially to blame. We’re trying to find whether some foods are triggers.” The team must design and order intravenous feedings for Crohn’s patients whose absorption is too limited for them to survive on their own. In addition, the team works with patients with short bowel syndrome following surgery for intestinal vascular disease. The team provides clinical management of nutrition for CHOP children who have needed intravenous feeding since infancy and have been transferred when they became adults. And they work with patients with mitochondrial syndromes that result in bowel malfunctions, as well as some cancer patients undergoing chemotherapy. “Each patient presents a unique problem requiring a unique feeding,” she says. “My role as a clinical dietitian is to make sure we’re meeting the nutrient requirements while not giving toxic levels of anything.” For example, she says, “we have to make sure we don’t give them so much of a metal that they store it in a part of the body where it shouldn’t be.”

CONCLUSION: Eventually, clinical nurses will work with teams to individualize nutrition based on personalized genetics, microbiotic traits, and behavioral characteristics.

COMMUNITY HEALTH: The Social Determinants

TERRI LIPMAN PHD CRNP FAAN, Miriam Stirl Endowed Term Professor of nutrition, spent years as a nurse practitioner trying to educate families to change their food behavior. “I did this without an appreciation for the root causes of poor nutrition in under-resourced families”: food insecurity and insufficient access to good food. “Both obesity and food insecurity disparately affect families living in poverty,” she says. “There are areas of Philadelphia that are second only to the Bronx in rates of child hunger.” While health care focuses on addressing genetics, biology, and behavior, she says, “these factors together account for only about 25 percent of health outcomes.

breastfeeding has metabolic benefits that go beyond the period of weaning.”



CHARLENE COMPHER
PHD RD CNSC LDN FADA FASPEN

Professor of Nutrition Sciences;
Shearer Endowed Term Professor
in Healthy Community Practices;
Director, Nutrition Programs

CURRENT AREA OF RESEARCH

Impact of diet and gut microbiome on clinical outcomes, particularly for pregnant women to spot predictors of premature birth. Works with collaborators at the Perelman School of Medicine, the Fetal Medicine Service, and specialists in infectious disease and biostatistics.



We’re working right at the forefront of identifying dietary patterns that indicate higher risk for spontaneous preterm birth. In the U.S., our preterm birth rate is higher than that in other developed countries. We hope to be able to design interventions to reduce that rate.”



SHARON IRVING
PHD CRNP FCCM FAAN

Assistant Professor of
Pediatric Nursing

CURRENT AREA OF RESEARCH

Improving odds of survival and healthy development ▶

Social determinants of health represent the remaining 75 percent.”

Eating unhealthy food is not just a matter of cost per calorie—the common belief that the high obesity rate among residents of low-income neighborhoods is necessarily caused by lower expense of calorie-dense foods. “Some fruits and vegetables are not that expensive,” Dr. Lipman says. “But if you have to travel on several buses to a supermarket that sells fresh produce, while around the corner from your home is a store with easily accessible high calorie packaged food, you’re going to go where the food is the most easily accessed.”

Behavioral approaches can be perceived as placing blame on families. “The notion that under-resourced families have the time, money, and necessary transportation to buy fresh fruits and vegetables—that’s unrealistic. And it makes us complicit in ignoring factors that lead to lack of access to healthy food.”

And food itself is not the only key determinant of a family’s nutrition. “A family’s total income doesn’t define whether

they can comfortably afford foods that are healthful for their family,” she says. “Other costs of living, such as housing, clothing, and transportation are all competing for the same money—sometimes leading to an inadequate food budget.”

Terri Lipman agrees. “For a family with housing insecurity, buying fruits and vegetables may not be high on their priority list.” She directs much of her research and clinical attention to West and Southwest Philadelphia, areas with high levels of poverty. The key to having families eat healthier food? “Community engagement,” she says. Noting that community gardens in particular have been successful in promoting a sense of ownership, she points out the success of Bartram Gardens in Southwest Philly, where high school students and residents till a working farm. “The community has easy access to those fruits and vegetables,” she says. “They feel a sense of ownership. They feel welcome. It’s very different from taking a few buses to a grocery store that may be crowded, unfriendly, and has no connection to the community.”

A second answer: financial support. Penn Nursing faculty are working on a grant proposal that links anchor institutions with the community, providing backing for full grocery stores in food deserts.

A third answer: nutrition education that recognizes the importance of introducing healthful foods in innovative ways. Penn nurse practitioner students work with high school students in the Netter Center’s Agatston Urban Nutrition Program to bring healthful

eating to the community. When the subject of cauliflower came up among elementary school children, the response was a definite no. Next meeting, the Agatston Program high school students brought the children a dish of mashed cauliflower. “The kids said, ‘These are the best mashed potatoes we’ve ever had.’” Dr. Lipman’s nursing students hand out recipes that connect with foods of various cultures, substituting healthful ingredients that blend in with the accustomed taste. Similarly, the high school students in the Agatston Program came to a physical activity program with large coolers filled with fruit-flavored water—strawberry, watermelon, and lemon. “Community members said they never knew water could be so delicious,” she says. “The idea came from youth in the community demonstrating that water can compete with the sugary beverages that strongly contribute to obesity.”

CONCLUSION: Behavioral and biophysical approaches alone won’t solve America’s nutrition problems. Food is a social phenomenon.

NURSING EDUCATION: On Par with Physics?

YOU NEED LOOK no further than Penn to see nutrition’s elevation as a major science. Penn Nursing started its nutrition minor, jointly shared with Arts & Sciences, in 1995, and more than 315



It’s not just a matter of cost per calorie—the common belief that the high obesity rate among residents of low-income neighborhoods is necessarily caused by lower expense of calorie-dense foods.

3 Ways to Talk Nutrition with Patients

“Nurses are an underutilized component of the conversation,” says Ariana Chao. She teaches a course on weight management and obesity treatment that includes role-playing scenarios. “For the students, it’s often informative to imagine what it’s like to be the patient,” she says.

Here are a few tips she offers students to prepare them for clinical conversations.

1. Watch for insensitivity.

“Sometimes people can say things that seem sensitive to them,” Dr. Chao says. But people can unintentionally sound a little bit more judgmental than they mean to.”

2.

Avoid scare tactics.

“They don’t work that well.” Keep the conversation positive, she says. “Encourage them.”

3.

Meet the patient in the middle.

“Bring up pros and cons. Ask whether they think

a food is harmful or not. See what they’re willing to change, and what they’re unwilling to change. If they refuse to give up soda, would they be willing to cut back? Very rarely do I tell patients that they can never eat something ever again. That can really alienate them. I try to help them incorporate healthier behaviors into their lifestyle in a way that will work for them.”

of critically ill infants and young children.

“We’re learning that how a child presents in critical illness has some associations with their outcomes. If a child presents in a less than optimal nutritional stance, and they present in critical illness such as sepsis, they have a longer length of stay, a longer need for mechanical intervention, and a higher risk of mortality. On the other side of that pendulum is a child who’s obese. The literature leans toward their having a longer hospital stay and a higher utilization of resources, but less of a tendency to mortality. We call it the obesity paradox.”



DIANE SPATZ

PHD RN-BC FAAN

Professor of Perinatal Nursing;
Helen M. Shearer Term
Professor of Nutrition;
Director, Lactation Program

CURRENT AREA OF RESEARCH

Creating models of research, education, and clinical practice to improve outcomes in human milk and breastfeeding. Developed the 10-Step Model for Improving Breastfeeding in NICU Babies.

“For a baby born critically ill, human milk reduces the chance of necrotizing enterocolitis by 77 percent. We also know that if we feed the baby human milk only, the milk is tolerated better, getting the baby off the ▶

students have graduated with it, taking three electives ranging from growth and development to genetics to diabetes. The second major in nutrition science began in the 2017 academic year; ten have graduated. An additional 70 are currently enrolled in either the second major or the minor. “In the nutrition classrooms, our nursing students enjoy integrating with every other major on campus that you can imagine,” says Dr. Compher, who directs nutrition programs. “It’s a rich learning environment.” She tries to incorporate students into clinical applications and includes some in her own research.

Bart de Jonghe, who works with Dr. Compher as assistant director of nutrition programs, tells students that “nutrition courses will put you ahead of everyone else.” He notes that the average person eats 30,000 meals in a lifetime. “Being armed with nursing science and nutrition science, that really gives you a handle for working with patients in ways that encompass the spiritual, the mental, and the physical. That’s a person’s overall health. If you understand what food means to someone, what it means to prevent nutritionally related disease—that has a lot of legs when you’re in a treatment setting.” He adds: “I’d love to see nutrition science held in the same regard as physics or biology.”

To see how well nutrition education works for students, we called two 2018 BSN double majors, Charis Anderson RN and Rachael Peters RN, and asked each for her take on the popular Keto diet (short for “ketogenic”). The diet has its users reduce carbs to 5-10 percent of calories and protein to 15-30 percent while increasing fat consumption to 60-75 percent, with the promise that the body would go into ketosis and convert fat into energy. Each student spoke like a good scientist, explaining the theory behind the diet and its risks without actually coming out and saying the diet is a terrible idea. “I prefer reading research articles over trusting nutrition information shared in the news,” Peters said. “Penn taught me not to trust everything—to make sure that everything is evidence based.” She noted that one class on nutritional neuroscience consisted of analyzing research articles. “It was really eye-opening,” she said. “Our professor wanted us to see that the author may say one thing and the data may say another.”

Charis Anderson used the diet as a

way to show the problems with fad diets in general. “It’s like you’re picking what you want while sacrificing other aspects of your health,” she said. “In this case you may be choosing weight loss at the expense of your cardiovascular health.” On the other hand, she noted that refractory epilepsy can be treated with a Keto diet. “That blew my mind. It can be helpful. But I was a Penn student so the moment I heard that I jumped on the research, and I was seeing so much connection to cardiovascular compromise. Plus, your brain wants glucose for fuel, not ketone bodies. Any understanding of physiology should indicate that maybe it’s not a long-term solution. It’s not balanced.”

Balanced?

“We talk about balance all the time,” Anderson said.

And what will they do with their nutrition knowledge? Anderson spent the summer after graduation at a tech startup in San Francisco, working on an online platform for travel nurses. In September she began a new job as an RN in oncology and hematology at Lucille Packard Children’s Hospital, with Stanford Healthcare. Peters is beginning a two-year stint as an RN in the intensive care unit at Penn Princeton Medical Center, a work commitment that came with her Sands Scholarship at Penn. While neither seems directly aimed toward a nutrition career, Peters emphasizes the deeper benefits of the double major. “We really learned down to the foundation of why disease occurs. Take cardiovascular disease; learning about oxidative stress helped me understand how plaque builds up in the body. Studying metabolism gave me new insights into how we create and utilize biology. Other classes gave me a perspective into nutrition in the clinical setting and helped me explore the impact of food insecurity.”

Anderson summed it up: “Nutrition and health care aren’t separate topics,” she said. “I couldn’t stop studying nutrition, because nutrition is health care.”

CONCLUSION: Nutrition is integral to health care, and Penn Nursing is responding.

JAY HEINRICHS has written for the *New York Sunday Times Magazine*, the *Huffington Post*, and NPR’s “All Things Considered.” He is the author of a book of physician-tested home remedies and of three books on rhetoric.

THE GUT'S ECOLOGY

Research on the gut microbiome offers promises to the future of health care, even while it shatters widespread myths. Nursing Professor Charlene Compher and her Penn colleagues are at the forefront of discovery.

THE HUMAN GUT is a 28-foot-long ecosystem with a balance (or imbalance) of temperature, acidity, mucous membranes, and thousands of species of microbes. These bacteria bestow a vast diversity to each of us, comprising a genome 150 times greater than our own human code. Our microbiome helps digest our food, contributing to the release of vitamins and minerals, restoring our gut linings, crowding out the more harmful

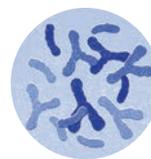


Bacterial Biographies



AKKERMANSIA MUCINIPHILA

This gut bacterium has been shown in animal models to be associated with weight loss and fewer type 2 diabetes symptoms. It may also be linked to higher efficacy in cancer immunotherapy treatments.



BIFIDOBACTERIUM INFANTIS

This mother-acquired microbe found in newborns releases short-chain fatty acids that feed the baby's gut cells, which in turn produce helpful metabolites such as anti-inflammatories.



IV more quickly—reducing complications, infection, and liver damage.”



TANJA KRAL

PHD

Associate Professor of Nursing

CURRENT AREA OF RESEARCH

Causes of obesity in children and adults, including cognitive, sensory, and nutritional controls of appetite and eating.

“

When children are born they have an innate ability to regulate their intake. Not all, though. This is where genetics come in to play. Children who have a genetic predisposition to obesity have a tendency to overeat when exposed to an obesogenic environment.”



KAREN GLANZ

PHD MPH

George A. Weiss University PIK Professor; Professor of Nursing

CURRENT AREA OF RESEARCH

How community and health care settings affect healthy eating, obesity prevention, cancer prevention and control, and chronic disease management and control.

“

There are significant numbers of people who struggle to provide food. The issue both an economist and hunger expert would tell you, is that the ►



FUSOBACTERIUM NUCLEATUM

Gut microbiomes lacking diversity, such as those of IBD patients, tend to be populated by inflammatory microbes such as *F. nucleatum*, a species associated with colorectal cancer.



HELICOBACTER PYLORI

Some microbes have mixed benefits. While long associated with stomach ulcers and risk of stomach cancer, *H. pylori* reduces the risk of GERD and esophageal cancer.

microbes and releasing antimicrobial chemicals to kill the most dangerous bacteria. Gut microbes affect the way we smell. They help our immune system detect dangers, affect the efficacy of drugs like acetaminophen, and may even influence our behavior. Changes in the microbiome have been associated with obesity, asthma, colon cancer, diabetes, and even autism.

But microbes don't work alone. For that matter, the gut microbiome itself hardly works in isolation. The science is still unclear on how much a changing microbiome's association with illnesses and weight loss are correlation, and how much are causation. Despite many claims on the Internet, probiotics are no magic cure. As with organisms in a garden or forest, microbes depend on what we feed them. While microbes can be introduced to a gut that lacks them, nutrition helps determine which species flourish and which ones diminish or even die out. Some microbes—including those associated with weight loss, prefer dietary fiber. Others, especially those microbes that often populate the guts of obese patients, feed on saturated fats and food additives such as CMC and P80.

These microbes produce the metabolites that help determine our health. And even here, diet plays a role. Professor of Nutrition Sciences Charlene Compher notes that gut microbes can convert common essential nutrients such as dietary choline and carnitine into trimethylamine. This gets oxidized in the liver to produce trimethylamine oxide, a chemical associated with increased risk of coronary vascular disease.

Dr. Compher and her colleagues are helping discover the ways that nutrition plays a role in the microbiome's chemical production, and how changes in diet (and the care of infants) can affect our long-term health.

These pages offer the latest on what we know of our diet-dependent internal environment.

-The editors



Microbes

Of the thousands of species of microbes in our gut, fewer than 100 cause diseases. Yet taxonomy alone fails to measure the gut microbiome's influence on a patient. Metabolites, the chemicals produced by microbes and processed by the liver and other organs, are the critical factor. Nutrition not only helps determine the constituents and variety of microbes in the gut; our diet also influences the production of metabolites.

Akkermansia muciniphila, a gut bacterium common in humans, is associated with weight loss and reduction of type 2 diabetes symptoms in animal studies. *A. muciniphila* also produces short chain fatty acids, which reduce inflammation. Plant carbohydrates such as inulin—found in many foods such as onions, garlic, and bananas—act as a fertilizer for this microbe. Inulin, along with oxalate, Leucaena, and other microbe promoters, can be given to patients in the form of prebiotics.

The Infant Gut

Full-term fetuses have functional immune systems that get suppressed by certain immune cells. This suppression prepares the gut and other organs for microbe colonization. Human milk provides an antibody bridge, helping control the growth of the baby's microbiome.

Three-quarters of a newly born baby's microbes come from the mother's vagina.

Among the most important mother-acquired microbes in a newborn: *Bifidobacterium*, which helps digest milk.

As baby picks up more microbes from its environment, the gut gets colonized by *Bacteroides* and other microbes that digest carbohydrates.

Human milk contains many more multiples of milk oligosaccharides than cow's milk. Human milk oligosaccharides (HMOs) seem to exist to feed the gut microbiome.

The microbe *Bifidobacterium infantis* releases short-chain fatty acids that feed gut cells. These cells in turn produce helpful metabolites such as adhesive proteins and anti-inflammatories.

The Microbiome in Health Care

Even short-term antibiotics can dramatically reduce gut flora diversity.

Clostridium difficile (*C-diff*) tends to affect patients in hospitals and other clinical settings where antibiotics are used widely. *C-diff* populates the gut where other species have been suppressed.

Probiotics may alleviate infectious diarrhea, and may reduce antibiotic-influenced diarrhea risk. They also have shown to reduce mortality rates in NEC (necrotizing enterocolitis). In NEC, however, human milk may produce the same or even greater benefits.

Unproven claims of probiotics: allergies, asthma, autism, diabetes, eczema, IBD, obesity.

FMT (fecal microbiota transplant) is administered many ways, including by colonoscopy, naso-enteric tubes, and capsules. It has been shown to help patients with IBD. Other claims—obesity, autoimmune diseases, irritable bowel syndrome—have not been proven.



CHARLENE COMPHER

Professor of Nutrition Sciences
Charlene Compher has a senior role on a Penn-wide team investigating the microbiome. We asked her to explain their work.

On Penn’s microbiome research: Penn is a highly regarded leader in this science, both globally and nationally. It’s a new type of team science that includes highly trained experts with different skills working together. Our group includes a gastroenterologist and biochemist who specialize in basic science and animal models; adult and pediatric gastroenterologists who specialize in human trials; a microbiologist in whose laboratory microbiome samples are analyzed for the DNA content of bacteria; and a statistician who specializes in analysis of high intensity data. As the group’s nutrition scientist, I lead the design, collection, and interpretation of dietary intake information in the overall context of gut microbiome data. There are also doctoral and postdoctoral trainees involved in each of these processes. At the end of each project, we sit around a table to discuss and interpret the findings along with their biological and nutritional implications.

On the influence of diet on the microbiome: Typical diet has a great influence on the microbiota. From around age 2, the microbiome remains stable throughout adulthood. The microbiota are really communities of bacteria that compete with each other for nutrients from the

human host’s diet; thus typical diet has great influence on the composition of the stable adult microbiome. Studies in children from remote African villages show a different microbiome than European children. Yet, in one of our studies comparing vegans and omnivores, the microbiome was not very different, possibly because of other environmental factors.

I like to think of the relationship between humans and their microbiome as a symbiotic one. We provide a nice niche for the microbes to grow and obtain their own nutrient needs. They help us to break down dietary fiber to produce health-protective compounds; they produce some vitamins; and they help us activate our immune system. This latter role may be especially important for preventing allergy, inflammatory bowel disease, and other conditions.

On diet and metabolites: Metabolites are the small chemicals that result when humans or bacteria use enzymes to break down (metabolize) nutrients. The metabolites are in many ways the end result of what we eat, after we’ve digested it and absorbed it into the blood. Our team compared the microbiomes of vegans and omnivores. The dietary intake of the two groups was radically different; the vegans ate less protein and fat, and much more fiber. Yet we were surprised to find that the gut microbiome in both groups was not totally dissimilar. However, there was a big difference in the metabolites from these two groups. A vegan diet contains more foods with micronutrients not contained in animal foods but that can be obtained when either the person or the microbiota break down the source foods using enzymes. These metabolites generally have positive effects on health.

On the complexity of their research: While it sounds simple to establish linkages between diet and health, it’s actually incredibly complex. When we do these analyses, we use nearly 200 diet variables. We compare these to literally trillions of bacterial genes and compare them to 800 metabolites. There’s a huge data stream that requires complex statistical approaches. We’re in the early phases of using AI to help us understand these massive data streams in real time. You have to group all those data into patterns. It’s very exciting and great fun. ❖

CONTINUED FROM PG. 31

competition for other things is the problem. It’s not like in your paycheck it says, “This much is for food and this is for housing.”



ARIANA CHAO

PHD CRNP

Assistant Professor of Nursing

CURRENT AREA OF RESEARCH

Exploring comprehensive bio-behaviorial approaches to treat obesity.



Challenges to nutrition include access to food, social norms, habits, time, knowing how to cook, taste, stress, genetics, and a host of other factors.”



TERRI LIPMAN

PHD CRNP FAAN

Miriam Stirl Endowed Term
Professor of Nutrition;
Professor of Nursing of Children

CURRENT AREA OF RESEARCH

Creating a collaborative, upstream, strategic vision to increase physical activity in youth and their families in West Philadelphia, where the poverty rate is among the highest in the country.



Addressing social determinants of health is central to providing optimal care, regardless of the health care setting.

Leadership

The Nurse’s Way

The director of the National Library of Medicine reveals how nursing provides a key asset for leadership.

FOR ME, NURSING is where it all began. I started my career with a BSN from the University of Delaware and then completed my MSN at Penn Nursing. I also hold a license as a registered nurse.

I think of myself as a psychiatric nurse, although I spent a few years in the mid-1970s on the 3-to-11 shift in a busy surgical shock-trauma ICU. I have also served on the faculty of nursing at Case Western Reserve and at the University of Wisconsin-Madison.

It helps to understand nursing to see why being a nurse is such a great asset in my role as director of the National Library of Medicine. To me, nursing is fundamentally the diagnosis and treatment of the human response to disease, disability, and developmental challenges.

Note that phrase “human response,” i.e., how people react to the challenges in their lives. Nurses focus on the human response, while the biomedical knowledge we have, like pathology or anatomy, helps us understand what a person is coping with and what kinds of complementary or supplementary supports are needed.

As noted nurse and author Virginia Henderson observed, nurses must actively engage with the patient to help him or her perform “those activities contributing to health or its recovery (or to a peaceful death) as he [or she] would do unaided had he [or she] the necessary strength, will, or knowledge,” with independence from the nurse the common



goal. Nursing addresses the whole person and helps that person live to the fullest extent.

Along the way, nurses come to know people differently than the other clinical disciplines. And that knowledge, I’ve discovered, helps me as Library Director.

It affords me special insight into the public patrons who use our services. I can imagine a young mother using MedlinePlus in the middle of the night to figure out how to comfort a feverish child. I can anticipate the information needed by someone with a late-stage cancer diagnosis, and recognize the

need to complement journal articles on treatment options with literature on comfort measures and death with dignity. And I can appreciate the challenges of navigating the health care environment, from its specialized vocabulary to its unique culture.



Nursing addresses the whole person and helps that person live to the fullest extent.

A nurse's way of knowing helps me set policies for integrating into the Library's formal standards and language systems the terminologies that address the social and behavioral domains of health. Nurses live in those domains, as much if not more than the technical or scientific.

Perhaps most importantly, my experience as a nurse has taught me that each person has his or her own strengths, and that the Library's resources should build upon those strengths to help the person make healthful choices, not just explain deficits.

But the benefits of being a nurse and a library director are not one-sided. Directing a library also lets me fulfill my nursing role, as I help others achieve the highest level of wellness possible.

As NLM director, I advocate for those in need, ensuring our literature is sufficiently inclusive. I improve patient care by guiding the fields of data science and biomedical informatics toward a future where professionals and

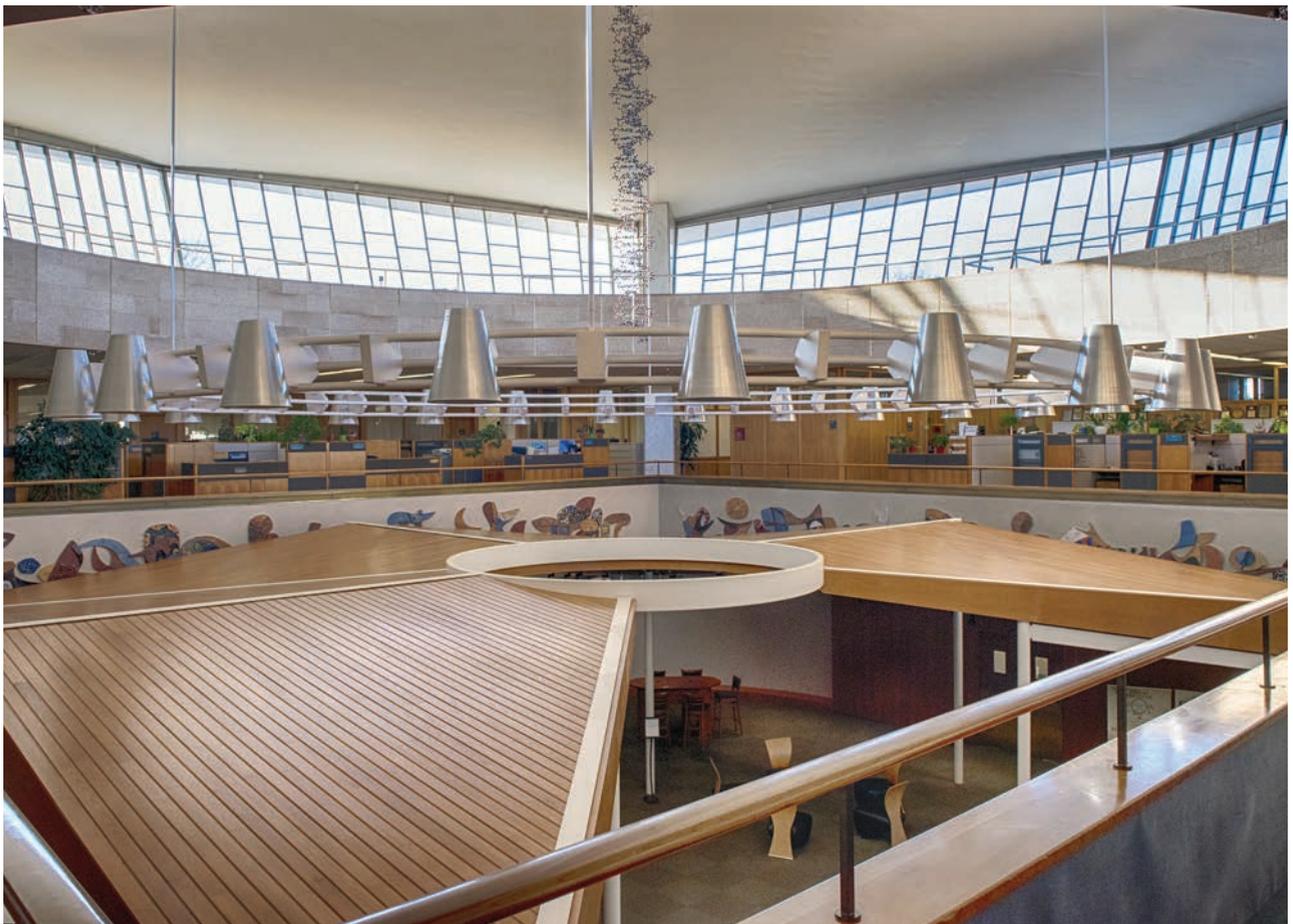
Patricia Flatley Brennan GNu'79 RN PHD is part nurse, part engineer, part information architect — and total innovator. A graduate of Penn Nursing's Psychiatric-Mental Health Program, she also holds a PhD in industrial engineering from the University of Wisconsin-Madison. Combining a diverse background that spans disciplines, she has led a pioneering career in health care information systems and technology. Since 2016, Dr. Brennan has led the field as Director of the National Library of Medicine at the NIH. She serves a global audience of scientists, health professionals, and members of the public, always aiming to empower through information. The goal? To improve public health and ensure the best possible experience in patient care. The advantage? Her unique and invaluable perspective as a nurse.

patients interact to achieve care goals. And I model for younger nurses a career path that engages all that I am as a nurse, while collaborating meaningfully across disciplines.

Being a nurse is not a job requirement for directing the National Library of Medicine, but it is certainly an asset. Advanced education as a health professional gives me an appreciation for how complex health care is, and how important it is to engage all disciplines toward

addressing that complexity.

Engaging patients as partners in care motivates me to build resources that foster full participation of people in health. And experience as a team player in psychiatric services enables me to join with my colleagues from library science, information and computer science, linguistics, medicine, and other disciplines to make the NLM the foundation of the future of health and discovery. ❖



COURTESY OF THE NATIONAL LIBRARY OF MEDICINE

▲ Nurse-run: The National Library of Medicine in Bethesda, Maryland, offers physical as well as online resources.

Nursing as Teamwork

The dean of the School of Health and Human Services at National University leads a new, multidisciplinary delivery-of-care model.

AS THE VIETNAM war carried into its second decade, Gloria McNeal began her first few years as a young nurse. It was the late 1960s when she joined the Navy, and it was the Philadelphia Naval Hospital where she got her start. There, among the steady onslaught of wounded soldiers and emerging scars, she gained what she cites as career-guiding experience.

“Military nursing really set the tone for my career. It exposed me to the leadership aspect of nursing,” McNeal says, explaining dynamics in which nurses can rank at or above the level of their physician colleagues. “I saw nurses using leadership to advance nursing practice, and I saw how important my role was to the field.”

After serving as a naval officer, McNeal would embark on her next chapter in academia. “I arrived at Penn Nursing for my master’s, and quickly found the same core concept I had found in the Navy: leadership.” A recipient of the Penn Nursing Outstanding Alumna award, she looks back on her time with Penn faculty and mentors as being equally transformative to her journey.

And that journey would take her through an accomplished—and trailblazing—career. Over the years, she would evolve from bedside nurse, to researcher, educator, innovator, and administrator. Her latest role is Dean of the School of Health and Human Services at National University in La Jolla, California, where she’s channeling her layers of experience into the next generation of health care.

Visionary Educator

Over the last two years, McNeal and her team at National University have overhauled the School’s curriculum with a clear vision for the future of health education. “Nursing needs to be an interprofessional experience,” McNeal says. “Some 40 years ago, I remember taking an interdisciplinary course at Penn that emphasized this concept. That was visionary. That was influential.”

As part of their curriculum, National University students from across disciplines work and learn together—including nursing, public health, health care administration, informatics, integrative health, allied health, clinical lab science, radiation therapy, clinical regulatory affairs, and health data analytics.

In addition to the cross-functional nature of their programs, the School’s core principles lie in person-centered health care. “Whether you’re one of the custodial folks or you’re the CEO of the hospital: the patient is at the center of the team,” McNeal says. “That’s what person-centered care is all about. It’s about providing a respectful, inviting environment that revolves around patients and their families.”

The Future of Mobile Care

McNeal’s vision for the classroom was long preceeded by her vision for the clinic. For her, the concept of meeting patients where they are—without access, and without resources—has always been top of mind. And since piloting some of the first mobile units in Pennsylvania and New Jersey some 20 years ago, she asks: What’s next?

“The ‘drive-by’ strategy of mobile clinics has its challenges,” McNeal says. “We are outsiders entering tight-knit communities, and there can be a certain level of mistrust there.” She knew gaining this trust would be key to serving these patients.

As part of a \$1.5 million grant from the Health Resources & Services Administration, McNeal and her team have set up five nurse-managed clinics throughout the neighborhood of Watts, an area of Los Angeles with some of the worst health care statistics in the country. But this time, her clinics aren’t on wheels. They’re embedded in places where people live, trust, and worship.

“We’re in churches and community centers where leaders already have the respect of the neighbors,” McNeal says. “Those community leaders are our point of entry. If the Reverend trusts us, the patients will too.”

In addition to the community aspect of the initiative, McNeal cites two other key elements to its success: an interprofessional approach and mobile health technology. As part of their curriculum, National University’s multidisciplinary students—from nursing and public health to informatics and data analytics—work on site and in teams to contribute to the design of the clinics. Likewise, state-of-the-art equipment and telemonitoring devices allow nurses to check in on patients in between site visits, maintaining consistent quality of care via remote access.

“It’s a new delivery-of-care model,” McNeal says. “And it’s working.”

Legacy of Leadership

McNeal’s roots aren’t too far in experience from those living in Watts, and they’re not too far in geography from those studying at Penn. Growing up in North Philadelphia, she understood the correlation between ZIP code and access—whether that be access to health care or access to opportunity.

“I had a mother who made sure I got both,” she says. McNeal’s mother was a nurse, too. An LPN and single parent who worked three jobs to pay for private tutors, securing McNeal’s foundation for educational success.

And the fruits of her labor have certainly paid off. McNeal has published more than 150 articles, abstracts, editorials, and book chapters, secured nearly \$12 million in extramural grant funding, led multiple institutions of higher education to new heights, and continually advances the nursing practice through technology and innovation. When you ask her where she learned how to be such a strong leader, she’ll talk about her influential experiences in the Navy and at Penn, where she learned from pioneers who were shaping their fields.

But it’s likely she began learning about leadership long before that—long before her distinguished career took flight. “My mother was inspiring. She was hardworking, passionate, and driven,” McNeal says. “Like most nurses are.” ❁

The projects referenced in this article are supported by two Health Resources and Services Administration (HRSA) of the U.S. Department of Health and Human Services (HHS) initiatives: under grant number UF1HP26986, Nurse Education, Practice, Quality and Retention – Veterans’ Bachelor of Science in Nursing Program for \$1.4 million, and under grant number UD7HP28533, NEPQR-IPCP for \$1,549,656. The information provided, content and conclusions are those of the author and should not be construed as the official position or policy of, nor should any endorsements be inferred by HRSA, HHS or the U.S. Government.



Nursing needs to be an interprofessional experience.



MY PROUDEST MOMENT

Amanda Jeuda RN CCRN Nu'12

Pediatric ICU Nurse at NY-Presbyterian

SINCE GRADUATING FROM Penn Nursing, I have spent my entire six-year career in the Pediatric ICU at Morgan Stanley Children's Hospital in New York. Following in the footsteps of my mom, I always knew my passion was in the care of the most critically ill children and I love the diversity of patient diagnoses in the ICU. During orientation, I had the unique experience of following my first liver transplant patient from

the OR to the ICU and my passion for post-transplant care was born.

Preoperatively, transplant patients are gravely ill and postoperatively, they face staggering obstacles before hopefully having positive results. Last year, I was assigned to an eight-month old baby who had just received a new liver from his godmother. I take my role as family advocate seriously and immediately bonded with this family. I explained everything in terms they would understand

and offered them encouragement as milestones were met. Thankfully, this baby has gone on to thrive and his parents have kept me updated in the year since.

I did not realize just how great of an impact my care had on this family until I was contacted a year later by NBC's Today Show asking to do a piece on me in honor of National Nurses Week. I loved learning from the mom that my "loud voice" advocating for her son during his most critical post-op hours gave her the confidence that he was in good hands. I do my job because I love it and care so much for these children, but I have to admit it can be extremely gratifying to see my hard work appreciated like this. ❧

Share your proudest moment!
Send an e-mail to:
Magazine@nursing.upenn.edu.



^ During Nurses Week 2018, Amanda Jeuda (right) appeared on The Today Show to share her passion for the care of critically ill children.

WAIT, YOU'RE A NURSE?

Jessica Way RN Nu'99

Nurse, Educator, and Politician-in-Training

CURRENTLY AN EDUCATOR and an Emerge alumni board representative for Emerge Pennsylvania, Jessica Way grew up a military child in the United States Navy and graduated from Penn Nursing with plans to become a registered nurse and work in public health. After stints as a maternal child health nurse in East Harlem; Norristown, PA; and near the border of Mexico, she spent a year on the bioterrorism planning team with the New York City Office of Emergency Management. She shared her journey with *Penn Nursing*.

Getting her start

The most important time I spent at Penn Nursing was in the program Bridging the Gaps. I got the chance to run a summer program for a group of children living in Southwest Philadelphia. That experience taught me that those with privilege must think deeply about how they can create pathways for people to be freed from poverty. My experience in Southwest Philadelphia taught me about the serious consequences of systemic injustice and racism and the dire consequences it has on communities of color. I did my community health rotation and my senior leadership project for Penn Nursing at the former Pepper Middle School in Southwest Philly, and that was the beginning of my relationship with the School District of Philadelphia.

Narrowing the Gaps

After several years working largely in communities of color, it was clear that there needed to be more health care professionals that were raised within these communities, and so I helped establish the Academy of Public Health at the Franklin Learning Center. We



have students from every section of Philadelphia; many are children of immigrants, and collectively, they speak over 20 languages. Many of my students' families rely on them to navigate Philadelphia's complex web of primary care, specialists, and inpatient care. They are unbelievable advocates.

At the Franklin Learning Center, I definitely encourage my students to consider nursing. The profession is a very large tent with room enough for every type of personality, but it needs more diversity. Unfortunately, the bar to enter nursing is very high and reliant on standardized test scores that are notoriously skewed against students of color. It is my hope that nursing schools like Penn will continue to find ways to facilitate the progress of amazing students like mine through to their BSN so that they can have every opportunity that I had.

Finding Politics

My interest in politics started five years ago, when in one fell swoop, the School District of Philadelphia closed 23 schools, including Pepper Middle School. I watched as African-American students from Germantown High School were locked out of the School Reform Commission vote, not even permitted to speak to the decision makers. I was horrified. I believe that all communities

deserve control over their schools, their health care, and their futures.

And then I joined the post-Trump bump of women who realized there must be more women in politics. Pennsylvania currently ranks 49th out of 50 states for female representation in government. EmergePA introduced me to the next crew of female political leaders in Pennsylvania and taught me how change happens within the Democratic Party on a grassroots level. I won my first election this year as a committee woman for the Cheltenham Democratic Party. As an education activist with the Caucus of Working Educators, a group dedicated to strengthening the power of our public schools and the communities they serve, I have learned the importance of deep organizing to impact change and that real power comes from a strong base of rank and file employees—not from the top down.

Future Plans

I plan to run for any office where I can focus on the importance of fully funding public schools in Pennsylvania. Pennsylvania is dead last for the percentage of school funding that comes from the state! It will take all of us, including Penn, to turn around the abysmal funding of our schools. I am looking forward to the challenge. ❖

Alumni Notes

» We want to hear about you! Send us a personal or professional update at NursingAlumni@nursing.upenn.edu or call us at 215.746.8812. Notes may be edited for space and style. Photos are encouraged.

1950s



^ **Ruth Lubic, HUP'55, HON'85**, was awarded the Urban Health Equity Champion Award by the New York Academy of Medicine Dr. Lubic was honored for her work as a champion of personalized care during labor and childbirth for all women. Dr. George Thibault, President of the Academy's Board of Trustees, introduced Dr. Lubic by stating, "Ruth has worked tirelessly to transform the way American women give birth and to improve outcomes for both mothers and infants."

"It is a great honor for me to have been selected for this new and most meaningful New York Academy of Medicine Award," Dr. Lubic stated during her acceptance speech. "The history lesson is that great and important changes in health care systems are possible with persistence." Ruth is a 2001 Special Recognition awardee from Penn Nursing and was the first nurse to receive the prestigious MacArthur Foundation "Genius" fellowship in 1993.

Virginia A. Lucas, Nu'55, GNu'63, received the Alumni Impact Award from Teachers College, Columbia University.

1960s

Laura L. Hayman, HUP'68, Nu'70, GNu'75, GR'82, was inducted into the International Nurse Researcher Hall of Fame on July 21, 2018.

Rose W. O'Driscoll, GNu'96, shared that she retired as assistant dean for administration from Villanova University, M. Louise Fitzpatrick College of Nursing in 2017.

1970s



^ **Marilyn D. Harris, Nu'72, GNu'76**, received the 2018 American Nurses Association (ANA) Distinguished Membership Award that recognized outstanding leadership and contributions to the mission of ANA. The award was presented at the ANA National Awards Ceremony in Washington, DC. M. Harris is a lifetime member of ANA.

Julia Tierney Davis, HUP'73, was awarded The

Legacy Award during the 2018 Penn Nursing Student, Alumni, and Faculty Awards ceremony.

Paige Sipes-Metzler, Nu'74, is vice-president at Aon Consulting.

Gloria J. McNeal, GNu'75, GR'98, is the Dean of the National University School of Health and Human Services. Her work with establishing nurse-managed on-site clinics and telehealth services was recently profiled in several publications including AARP and Campaign for Action.

Pamela Cipriano, HUP'76, was the keynote speaker at the National Student Nurses' association 66th Anniversary Convention in Nashville, Tennessee where she presented her address, "Nursing: Get Hooked. Insight, Inspiration, and Ingenuity".

Mary Kinneman, GNu'76, G'00, G'06, is the chief quality officer at Passack Valley Medical Center.

Kathy Shaver, HUP'76, had her paintings featured in *The Physicality of Painting*, a group exhibition at The InLiquid Gallery at Crane Arts.



^ **Terri Weaver, GNu'78, GR'90**, received the Penn

Nursing Outstanding Alumni Award ceremony.

1980s

Joanne Knee Coleman, GNu'80, is a nurse practitioner at the University of Virginia, Division of Pulmonary and Critical Care Medicine in Charlottesville, Virginia.

Lisa Bujno, Nu'83, GNu'87, is the assistant medical director at Ammonoosuc Community Health Services.

Sandra Minnick, GNu'85, is a nurse practitioner with Wealthspan Family Medicine.

Linda Graves, GNu'86, is a nurse practitioner with Reproductive Medical Associates.

Bernadette Lloyd-Sobolow, GNu'86, is a certified nurse midwife at Gentle Beginnings: Women's Health & Birth Care, a midwifery practice comprised of all Penn Nursing graduates.

Ruth Anderson, GNu'81, G'82, is professor and associate dean for research at the University of North Carolina at Chapel Hill, School of Nursing.

Dorothy Angelini, GNu'83, is the executive director of CE accreditations and approvals at OnCourse Learning.

Mary Jane S. Hanson, GNu'87, GNC'94, GR'95, was elected Vice Chair of the Commission on Collegiate Nursing Education (CCNE) Board of Commissioners for 2018 and co-chairs the Substantive Change Review Committee for CCNE. She



Dear Penn Nursing Alumni, Greetings!

The start of each academic year offers the opportunity to reflect upon the year before. It is a chance to take stock of the previous year's achievements, and set new goals. We hope that as you look back, you find that your year was full of personal triumph, and that you were able to participate in some of the wonderful accomplishments of Penn Nursing students, alumni, staff and faculty. As you develop your plan for this academic year, consider how Penn Nursing might add depth to your aspirations.

The Penn Nursing Alumni Board welcomes a new leader, Maya Clark Cutaia to the role of President. Maya has served on the board for over a decade in a multitude of roles, most recently as vice president. She is an Assistant Professor at NYU's Rory Meyers College of Nursing and also leads the Xi Chapter of Sigma Theta Tau. She brings visionary thinking that supports the inclusion of alumni across specialties and locales in Penn Nursing's persistent mission of excellence. Ashley Z. Ritter will remain

on the board as past president, supporting multiple exciting initiatives currently underway. Stay tuned for new and updated programming focusing on our young alumni within 10 years of their most recent degree and growth in opportunities for mentorship.

Please consider enhancing your engagement with Penn Nursing in the upcoming year. With a constant focus on how to best meet the needs of our growing cadre of alumni, Penn Nursing and the Alumni Board work diligently to provide intriguing opportunities to connect – with each other, current students, faculty, and the larger University.

- Penn Nursing Alumni Webinars
- Adult Gero Primary Care Reunion
- Homecoming's Nurse Networking event
- Conference Meet Ups
- Dean and Faculty On the Road events

Finally, tell us how you engage at Penn by visiting QuakerNet to complete your profile badges to Go, Give and Lead and demonstrate the power of Penn!

Maya N. Clark-Cutaia Nu'03 GNu'06, PhD, ACNP-BC, RN
Interim President,
Penn Nursing Alumni Board

Ashley Z. Ritter Nu'07 GNu'10 PhD, MSN, CRNP
Past President,
Penn Nursing Alumni Board

GET INVOLVED

Student-Alumni Mentoring

Sign up to be part of our Mentoring Network and help answer student questions about choosing a specialty, finding a job, shadowing opportunities, what neighborhood they should consider when relocating to your area, and more. Alumni of all degree levels and locations are needed to connect by phone, email, or in person. Find out more at www.nursing.upenn.edu/alumni/networking-connections/

Honoring a Star: Alumni Awards

Do you know an exceptional Penn Nurse? Alumni of all degree levels are eligible for six annual alumni awards recognizing clinical excellence, innovation in inter-professional practice, preservation and/or scholarship of nursing history, alumni and student spirit and connections, and the Outstanding Award that recognizes a leader with an outstanding career that has advanced the profession. See our website for more information: www.nursing.upenn.edu/alumni/events-programs/penn-nursing-alumni-awards/

Find Your Online Community

Did you know that we host seven groups for alumni and students on LinkedIn? Join our main page, Penn Nursing Alumni, then join one of our specialty pages.

was also named a 2018 American Association of Nurse Practitioners Fellow. Mary Jane is a professor and director of the Graduate Program in Nursing at the University of Scranton and practices as a nurse practitioner for Lehigh Valley Physicians Group Family Medicine in Albrightsville, PA.

Maureen Gray, GNu'88, is a nurse with the Wappingers Central School District.

Lisa Hecht, GNu'89, is a nurse practitioner with Mainline Healthcare.

1990s

Bonitta Steuer, GNu'90, is a certified nurse midwife with the University of Vermont Medical Center.



Maribeth Schreder LeBreton, GNu'91, GNu'95, graduated from Widener University with her Doctor of Nursing Practice in May 2015. She is a nurse practitioner, working with an interprofessional team in an innovative clinic at Lancaster General Health/Penn Medicine.
Nancy Block, GNu'92, is the school nurse at Springside Chestnut Hill Academy.



Ruthlynn Greenfield-Webster, Nu'92, received the Friar of the Year 2018 Award from Penn's Friars Senior Honor Society.
Diane Kondas, Nu'92, is a program director at Seton Hill University.
Katharine Donaldson,

GNu'93, received the Alumni Award for Clinical Excellence during the 2018 Penn Nursing Student, Alumni, and Faculty Awards.

Karen McEvoy-Shields, GNu'93, recently began her role as certified nurse midwife at Virtua OB/GYN and Midwifery.

Marsha M. Weiner, GNu'93, is an assistant professor at the Nova Southeastern University, College of Nursing.

Martha Champlin, GNu'94, is a nurse practitioner at Primecare Medical Associates.

Mary Anne Diamond, GNu'94, is a staff midwife at the Hospital of the University of Pennsylvania.

Patti Griffith, GNu'94, received the Dean's Award for MS/MSN/DNP Scholarly

Mentorship during the 2018 Penn Nursing Student, Alumni, and Faculty Awards.

Kim Caraway, GNu'96, is working at New York Presbyterian Hospital as a certified nurse midwife.

Rachel Grencavich, GNu'96, is a nurse midwife with Axia Women's Health.

Nuria Hahn, GNu'96, is a nurse practitioner at Infinity Medical Center.

Shoshanah Belgrade, C'98, Nu'98, works at UnitedHealth Group as a field-based RN case manager.

Virginia Marshall, GNu'98, is principal and manager of Palliative Care Consultants.

Laura Norris, GNu'98, is a clinical services division manager at Walla Walla County Department of Community Health.

Lisa Barbarotta, Nu'99, is the Program Manager of Oncology Nursing Education & Practice for Smilow Cancer Hospital.

2000S

Katy Meilleur, Nu'01, GNu'04, is a tenure track investigator at NINR and chief of the Neuromuscular Symptoms Unit.

Eeseung Byun, GNu'06, GR'13, is a professor at the University of Washington, School of Nursing.

Sarah Collins, Nu'03, is at Columbia University as an assistant professor of biomedical informatics and nursing.

Kathleen Pokorny, GNu'03, is a clinical instructor with the University of Pennsylvania.

Hilaire Thompson, GR'03, was inducted into the International Nurse Researcher Hall of Fame. She is a professor and graduate program director at the University of Washington School of Nursing and is a nurse practitioner at The Polyclinic.



^ **Elizabeth White, Nu'03, GNu'06, GR'18**, received the Dorothy Mereness Award during the 2018 Penn Nursing Student, Alumni, and Faculty Awards ceremony.

Susan K. Flavin, GNu'04, shared "I earned my PhD in nursing science from the Medical University of South Carolina in 2015, with a dissertation entitled "Perceptions of Social Isolation and Social Support in Persons with Alpha-1 Antitrypsin Deficiency or Sarcoidosis". I'm currently a director in clinical immunology drug development at Johnson & Johnson, and a PCORI Northeast Ambassador."

Kimberlee Clark-Raby, Nu'06, GNu'08, is a nurse practitioner at Sutter Health.

Elizabeth Staebler, Nu'06, GNu'12, is with Pizzica Pediatrics as a nurse practitioner.

Heather Begun, C'91, Nu'07, GNu'10, is a pediatric acute care nurse practitioner at Urgent Care for Kids.

Lisa Polise, GNu'07, is a nurse with CHOP.

Ashley Z. Ritter, Nu'07, GNu'10, GR'18, received the Claire M. Fagin Award at the 2018 Penn Nursing Student, Alumni, and Faculty Awards ceremony.

Lottie Bottor, GNu'08, is a nurse practitioner with CHOP.

Lindsay Dauphinee, Nu'08, GNu'10, is a certified nurse midwife at Gentle Beginnings: Women's Health & Birth Care, a midwifery practice comprised of all Penn Nursing graduates.

Carol Hanselman, Nu'09, W'09, GNu'13, is the founder of Joy Wellness Partners, specializing in regenerative medicine and



Dear Fellow Alumni:

Since I wrote you last, the HUP Alumni Nurse's Association had our Spring Luncheon at Concordville Inn, on April 28th. The HUP Class of 1978 celebrated their 40th Reunion at the luncheon, organized by Mary Wilby HUP'78. Ten alumni from the Class of 1978 attended, for a total of forty HUP Alumni and a few guests. It was a very beautiful spring day, and I was pleased to recognize the class of 1978 – the last class to graduate from the Hospital of the University of Pennsylvania School of Nursing.

The Board and I were also pleased to have Antonia M. Villarruel, PHD, RN, FAAN, Dean of the Penn School of Nursing with us, along with Monica Salvia and Lisa Kricun from Penn Nursing's Office of Institutional Advancement. Dean Villarruel and her team remain very supportive of our HUP Nurse's Alumni Association and enjoy attending HUP Alumni luncheons.

During the Luncheon, the Dean spoke to us about the Penn Nursing Campaign that launched in April 2018 and will continue through 2021. She explained the campaign's priorities and shared how HUP Alumni are an important part of the fundraising and engagement efforts for the School. We will be hearing more about the Innovating for Life and Living Campaign as it moves forward.

To stay connected to your classmates and receive our twice-annual newsletter, I strongly urge all HUP graduates to become members of the HUP Alumni Association.

I also urge members to consider running for a Board of Director or other position, particularly if you were a recipient of a HUP Alumni Scholarship to advance your education. Please get involved and help us keep the HUP Legacy alive.

**Elaine A. Dreisbaugh HUP'61
MSN RN CPN
President of the HUP
Nursing Alumni Association**

GET INVOLVED

Serve as a HUP Alumni Board Member

Consider volunteering for a two-year term on the HUP Alumni Nursing Association Board for the Spring 2018 ballot. We strongly encourage graduates from the 1960s and 1970s, as well as HUP Alumni Scholarship recipients.

Most HUP Alumni Board Meetings are held in Philadelphia on a Monday evening during the academic year. We offer conference call options for our meetings, so you can call in from anywhere in the United States.

Susan McKelvey is the Nomination Chairperson. Find out more by emailing the HUP Board at hupalum@nursing.upenn.edu.

Become a HUP Alumni Association Member

If you are not a HUP Alumni member, we urge you to join the HUP Alumni Association. The Association depends on your support. To join, contact us at hupalum@nursing.upenn.edu. Lifetime membership is \$150; annual dues are \$20. Members receive the semiannual newsletter by mail.

hormone balancing. Carol and her business were profiled in SD Voyager in February 2018.

Kari Somers, Nu'09, GNu'11, is a midwife with Augusta Healthcare for Women.

2010s

Augustin Kozhimala, Nu'10, W'10, is an assistant nurse manager and clinical coordinator at NYU Langone Health.

Waverly Lutz, Nu'10, GNu'12, is a certified nurse midwife with Gentle Beginnings Women's Health & Birth Care. She's also a clinical associate working with CNM students at the University of Pennsylvania.

Chelsea McEvoy, GNu'10, is a family nurse practitioner with Penn Medicine.

Jessica Silvery, GNu'10, works at Sanford Health as a nurse practitioner.

Amy Weissbarth, GNu'10, is a women's health nurse practitioner at Inova Health Systems.

Susan K. Keim, GNu'11, GR'18, received the Sigma Theta Tau PhD Leadership Award during the 2018 Penn Nursing Student, Alumni, and Faculty Awards on May 11.

Moshe Reiss, GNu'11, is a clinical research oncology nurse at the Perlmutter Cancer Center of NYU Langone Health.

Emily Robertson, Nu'11, GNu'13, is a nurse practitioner with MedStar Health.

Dacey Stratton, Nu'11, GNu'13, is medical co-director at Puentes de Salud.

Victoria Leri, Nu'12, GNu'17, recently began her role as acute care nurse practitioner at Thomas Jefferson University Hospitals.

Mohammad Mojadidi, Nu'12, is a nurse manager of ICU and telemetry at Kaiser Permanente.

Angela Nguyen, Nu'12, GNu'17 recently began her role as a medical critical care CRNP at the Hospital of the University of Pennsylvania. Her first

publication "Use of Recruitment Maneuvers in Patients with Acute Respiratory Distress Syndrome" was just released in Dimensions of Critical Care Nursing".

Loretta Sernekos, GNu'12, received the Dean's Award for Teaching Excellence during the 2018 Penn Nursing Student, Alumni, and Faculty Awards on May 11.

Rachael Starnes, GNu'12, is a pediatric nurse practitioner at Ashburn Pediatrics.

Anny Stu, G'06, GFA'06, Nu'12, GNu'14, is a nurse practitioner with UCSF Medical Center.

Amanda Arnone, Nu'13, GNu'16, works at New York Presbyterian as a clinical manager.

Saumya Ayyagari, Nu'13, received the Sigma Theta Tau Research Award during the 2018 Penn Nursing Student, Alumni, and Faculty Awards on May 11.

Teresa Cavara, GNu'13, is a clinical nurse specialist at Alfred I. du Pont Hospital.

Julia Hill, Nu'13, GNu'15, GR'15, works at North End Waterfront Health as a family nurse practitioner.

Priscilla Nakano, C'10, Nu'13, GNu'17, is a pediatric nurse practitioner at Texas Children's Hospital.

Annie Perng, Nu'13, GNu'17, is with Perelman Center for Advanced Medicine as a nurse practitioner.

Kevin Zeng, GNu'13, is a nurse practitioner at Stanford Health Care and a department manager at Kaiser Permanente.

Sarah Aboud, GR'14, is an assistant professor at the University of Illinois Chicago, College of Nursing.

KC Benchimol, Nu'14, received the Joyce E. Thompson Award in Women's Health during the 2018 Penn Nursing Student, Alumni, and Faculty Awards ceremony.

Beth Anne Corcoran, GNu'14, is a psychiatric nurse practitioner at the Fox Chase Cancer Center.



Emilia Flores, Nu'14, GR'17, was awarded the Ann Wolbert Burgess Endowed Student Award during the 2018 Penn Nursing Student, Alumni, and Faculty Awards ceremony.

Kristen Fournier, GNu'14, is a manager at University of Minnesota Physicians.

Judith Ikpah, GNu'14, is a nurse practitioner with the Hospital of the University of Pennsylvania.

Katherine Komondor, GNu'14, is a nurse practitioner with the CHOP.

Kristin Schoonover, Nu'14, GNu'17, is a pediatric nurse practitioner at CHOP.

Thomas Speranger, Nu'14, GNu'17, is a nurse practitioner at Tohickon Internal Medicine.

Max Topaz, GR'14, is a senior lecturer at the University of Haifa, Cheryl Spencer Department of Nursing. In March 2018, he organized a conference, *Technology in Patient Centered Care Services*, in Haifa. He was also awarded two grants, one from The Israeli Institute for Health Policy Research and the other from The Israeli Council for Higher Education.

Emily Tsao, Nu'14, is a registered nurse at the Hospital of the University of Pennsylvania.

Justin Walzl, GNu'14, is working at WellSpan Cardiology as an acute care adult nurse practitioner.

Lakiesha Bennett, GNu'15, is a nurse practitioner at NYU Langone.

Heather Diffendall, GNu'15, is working as a nurse practitioner with The Heart

Group of Lancaster General Health.

Keri Ann Flanagan, GNu'15, is a part of the Christiana Care Health System as an APRN neo-natal nurse practitioner.

Meg Garelick, GNu'15, is a nurse practitioner at Manos Family Practice.



Nicholas Giordano, Nu'15, GR'18, received the Henry O. Thompson Prize in Ethics during the 2018 Penn Nursing Student, Alumni, and Faculty Awards ceremony.

Jillian Hagerich, GNu'15, works at Ilera Healthcare as the director of dispensing and assistant general manager.

Lauren Hasker, GNu'15, is currently working at CHOP as a radiology nurse.

Paule Valery Joseph, GR'15, received the Lillian Sholtis Brunner Award for Innovation during the 2018 Penn Nursing Student, Alumni, and Faculty Awards ceremony.

Kimberly Yoon, GNu'15, works at St. Luke's University Health Network as a palliative care nurse practitioner.

Ashley Zigarelli, GNu'15, is a certified nurse midwife at Gentle Beginnings: Women's Health & Birth Care, a midwifery practice comprised of all Penn Nursing graduates.

Chelsea Abad, GNu'16, is a registered nurse at Lux Dermatology.

Ian Alexander, Nu'16, is with the Hospital of the University of Pennsylvania as a nurse.

Tara Cooper, GNu'16, is a nurse practitioner at Penn Medicine.

Penn Nursing Babies



^ **Adrienne Buckley (nee Lehman), Nu'03**, shared "Baby Molly (our early Valentine!) with her big brother Michael Jr. (2 ½), and big sister Susan (5). Hubby/Dad Mike is behind the camera!"



^ **Jessie Reich, Nu'04, GNu'09**, and Chris Cera welcomed their daughter Demi Athanasia Cera on February 27, 2018. Jessie shares, "Mom, dad, and big brother William couldn't be happier and more in love!"

Ashley Z. Ritter, Nu'07, GNu'10, GR'18, welcomed baby Frederick J. Ritter IV on Sunday, July 22, 2018 at 8:30 pm at 9.1 pounds.



^ **Darina Petrovsky, GR'17**, gave birth to a baby girl, Victoria Ivanovna Petrovsky on May 29, 2018, weighing 9 pounds and 7 ounces. She joins older brother, Philip (age 3).

Do you have a new baby? We want to celebrate with you! Send a birth announcement and a picture to NursingAlumni@nursing.upenn.edu or call us at 215.746.8812. We'll send you a PennNursing onesie (6 month size). Photos are encouraged!

Kassandra Donnels, Nu'16, is a registered nurse with Penn Medicine.

Laura Garzio, GNu'16, works at Columbine Health Systems as a nurse practitioner.

Katrina Mansmann, GNu'16, is a nurse practitioner at Delaware Valley Community Health.

Melodee Arevalo Mendoza, GNu'16, is with CHOP as a nurse practitioner.

Sophie Mintz, Nu'16, is a registered nurse with Mount Sinai Hospital.

Lauren Murphy, Nu'16, is a senior staff nurse in the Pediatric Intensive Care Unit of NYU Langone Health.

Linnea Phillips, Nu'16, works at Penn Medicine, Labor and Delivery, as a clinical nurse.

Ana Sofia Prospero, GNu'16, is a nurse practitioner with Kennedy-Jefferson Health.

Amanda Van Pelt, GNu'16, is working at Greater Philadelphia Home Action as a family nurse practitioner.

Samantha Alessi, GNu'17, is at NYU Langone as a clinical nurse specialist.

Jordan Elizabeth Allen, Gnu'17, is a nurse practitioner at Genesis HealthCare.

Susanna Buff, Nu'17, is a labor and delivery nurse at NYU Langone.

Melissa Charlie, GR'17, was awarded Marion R. Gregory Award during the 2018 Penn Nursing Student, Alumni, and Faculty Awards ceremony.

Gretchen Cyros, Nu'17, GNu'20, is a staff nurse at the University of Vermont Medical Center.

Emily Finkelman, Nu'17, is a nurse at Cornell Presbyterian Hospital.

Therese Folk, Nu'17, is with Lancaster General Health/Penn Medicine as a nurse practitioner.

Chris Haddad, Nu'17, is a registered nurse at Penn Presbyterian Medical Center.

Marcus Henderson, Nu'17, recently began his position as a clinical instructor at Penn Nursing.

Mark Herman, GNu'17, is at Milton S. Hershey Medical center as an adult/gerontology acute care nurse practitioner.

Phoebe Hollyer, Nu'17, is a nurse at UCSF Benioff Children's Hospital.

Claire Hunn, GNu'17 shared, "I'm an oncology nurse practitioner fellow at Levine Cancer Institute in Charlotte, NC."

Jennifer Marthers, GNu'17, is a CRNP in the Department of Dermatology at Penn Medicine.

Hannah McCarthy, Nu'17, is registered nurse in the Pediatric Intensive Care Unit of NYU Langone Health.

Darina Petrovsky, GR'17, shared that she is an NRSA post-doctoral fellow at the University of Pennsylvania School of Nursing.

Taryn Pochon, Nu'17, is as registered nurse with Baptist Medical Center.

Justine Sefcik, GR'17, is a post-doctoral research fellow at the University of Pennsylvania School of Nursing.

Leah Turner, GNu'17, was awarded the Dean's Award during the 2018 Penn Nursing Student, Alumni, and Faculty Awards on May 11.

Shaykhia Washington, Nu'17, is a registered nurse with Preferred Home Health Care and Nursing Services.

Sarah Shin, Nu'18, received the 2018 Alumni Spirit Award for Graduating Students during the 2018 Penn Nursing Student, Alumni, and Faculty Awards ceremony.

Note: In our Spring 2018 issue, the photo of Donna Gage, GNu'85 was incorrectly identified as Deborah Raines, GNu'82 and vice versa.

We want to hear about you! Send us a personal or professional update to NursingAlumni@nursing.upenn.edu or call us at 215.746.8812. Notes may be edited for space and style. Photos are encouraged.

In Memoriam

1930s

Elizabeth (Fox) Eingorn, HUP'39, of Philadelphia, PA on February 9, 2018. She was preceded in death by her husband, Julius. She is survived by her children, grandchildren, and great-grandchildren.

1940s

Eleanor Artz, HUP'46, of Fountain, PA, on January 20, 2018. Eleanor was preceded in death by her husband, Melvin, and brother, Paul. She is survived by three sons, six grandchildren, and two great-grandchildren.

Dorothy Louise Blase, HUP'46, of Dallas, PA on February 2, 2018. Dorothy served her community as a registered nurse. She was predeceased by her husband, John. She is survived by her children, grandchildren, great-grandchildren, nieces, and nephews.

Mary Jane Ziegler, HUP'47, of Landsdale, PA on April 27, 2018. She is survived by her grandchildren and her many nieces and nephews.



^ **Ruth Inez Dunn, HUP'48**, on March 6, 2018. Ruth's nursing career included public health, school nursing, private duty, psychiatric, and discharge planning. She was a member of the Mount Holly Junior Women's League and Friends of Mount Holly Library. Ruth is survived by her three children and three grandsons.

Laura Mae Bossert Proctor, HUP'48, of West Chester, PA on July 22, 2018. After graduating from HUP, Laura worked as a nurse for Dr. Michael Margolies in Coatesville, at Paoli Hospital, and at Sugartown Elementary School. After raising their children, she and her husband, Joseph H. Proctor, formed Technical Associates which ran for 20 successful years until Laura's retirement. She was an active Cub Scout den mother, enjoyed painting and word games, and had great enthusiasm for traveling. She is survived by her three sons and one daughter, four grandchildren, and four great-grandchildren.

1950s

Charlotte Anne (Endy) Baker, HUP'50, of Newfane, NY on February 3, 2018. She was preceded in death by her husband, William, and two daughters; and is survived by four children and six grandchildren.

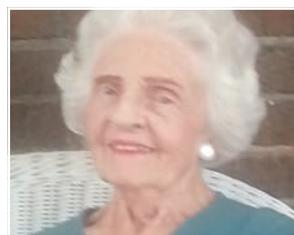
Annette Dobson, HUP'50, of Altoona, PA on October 6, 2017. After graduation from Penn, Annette worked at the Cresson TB Sanitarium, French Hospital in New York City, Garvey Manor, Hollidaysburg, and did private duty nursing. She was active in civic organizations and social causes and provided counseling for sexual assault victims and assistance for mentally disabled individuals. She is survived by her four children, six grandchildren, and a great-grandson.

Jane Hammel, HUP'50, of Exton, PA on May 8, 2018. Jane was active in the HUP Alumni Association for decades and worked as a registered nurse at various health institutions in the Philadelphia area. She was the wife of the late Warlyn F.V.

Hammel. She is survived by her children, Scott, Caroline, Patricia, and Valerie, and her nine grandchildren.

SherLee Locker, HUP'50, of Port Orchard, WA on February 28, 2016. SherLee was born in Port Norris, New Jersey. After graduating from Penn, she joined the Air Force as an OR nurse. SherLee is survived by her husband of 58 years, her three children, four grandchildren, and three great-grandchildren.

Jeanne Seltzer Ward, HUP'50, of Erie, PA on June 1, 2018. Jeanne was a registered nurse at the Hospital of the University of Pennsylvania and the Cleveland Clinic for many years. She was a member of the Wayside Presbyterian Church, the Kahkwa Club, Lake Shore Country Club, the Erie Club, the Lake Shore Garden Club, and the Junior League of Erie. She was preceded in death by her husband, Edgar, and her brother Richard. She is survived by her children, grandchildren, and many nieces and nephews.



^ **Joanne Louise (Swanson) Blickwedel, HUP'51**, on June 16, 2018. Born in Belfonte, PA on July 21st, 1930 she was the third child of Roy and Martha Swanson. She was Salutatorian for her 1948 graduation class from Emporium High School. After graduating from the Hospital of the University of Pennsylvania in 1951, she returned to Emporium to work at Sylvania Corporation in their chemistry lab where she met her husband.

Along with being a loving wife, caring mother, and

consummate homemaker, Joanne helped the lives of many people through her nursing skills by providing care to extended family and friends when needed. Her greatest joy was being involved in the lives of her children and grandchildren. Joanne was preceded in death by her husband, Theodore William Blickwedel in 2008. She is survived by sons, Ted Blickwedel of Smithfield, RI, Roy Blickwedel of Wayne, PA, and Dana Blickwedel of Nashville, TN.

Alice B. Savastio, HUP'53, of Lemoyne, PA on July 12. After graduating from HUP, Alice taught as nursing instructor at Hahnemann Hospital. During her tenure, one of her refresher courses was featured in the American Journal of Nursing. She later became the office manager for her husband's family practice, where she worked for over twenty years. She was an active member of the West Shore Country Club and won a number of tennis championships. Over the course of her lifetime, she participated in the Harvard University Nurses' Health Study. Alice was a long-time supporter of Penn, giving to Penn Nursing and the Gazette for over 32 years. She is survived by her sisters-in-law, nieces, and a nephew.

Barbara Kindig Anderson, Nu'54, GNu'72, of Athens, GA on October 12, 2016. Barbara was born in Pottsville, PA and grew up in Port Carbon, PA. She was a retired professor of nursing. She is survived by her four children, five grandchildren, and two great-grandchildren.

Jayne Ann Eckert, HUP'54, of Springfield, VA on May 1, 2017.

Mary Josephine (Huegel) Kircher, HUP'54, of Honey Brook, PA on June 16, 2017. Mary Josephine "Jo" met her husband while attending University of Pennsylvania. She enjoyed a long career in emergency room and

geriatric nursing. She is survived by her husband, four children, eight grandchildren, and three great-grandchildren.



▲ **Barbara Hawke Myers, HUP'54**, of Harrisburg, PA on January 22, 2018. Barbara was born in Yeagertown, PA. She married her high school sweetheart, C. Kenneth Myers, in 1954 in a military wedding. After graduating from the Hospital of the University of Pennsylvania, Barbara worked as a registered nurse at Lewistown Hospital and Harrisburg Polyclinic Hospital. Later in her career, she was a school nurse, a weight loss counselor for Diet Center in Camp Hill, and a receptionist for the former Coldwell-Banker Realtors in Harrisburg. Barbara enjoyed gardening, traveling, Broadway shows, evenings spent having dinner and playing Bridge with friends. She is survived by her husband of 64 years, two children, four grandchildren, and three great-grandchildren.

Jane (Eichner) Hartmire, Nu'55, on November 2, 2017. Jane spent time as a public health nurse in Philadelphia before moving to California with her husband. There, she supported his work with the California Migrant Ministry to establish the first enduring farm workers' union in the United States. She is survived by her husband, Chris, four children, and eight grandchildren.

Anne L. Kenna, HUP'58, of Austin, TX on June 15, 2018. Anne worked as both an OR and ER charge nurse in several hospitals throughout southern New Jersey and Florida. She received her nurse practitioner degree from UT Southwestern Medical School and went on

to provide family planning counsel and guidance through Planned Parenthood. Anne was a volunteer for the Texas Parks and Wildlife and the Lady Bird Johnson Wildflower Center. She knitted hundreds of newborn hats for St. David's Hospital in Austin and blankets for burn victims at Fisher House in San Antonio. She was preceded in death by her husband, James Duncan Kenna, and is survived by her brother, her children, her niece, and her grandchildren.

Ethel (Chitty) Faïres, Nu'59, of Broomall, PA on January 25, 2018. Ethel is survived by her daughter, son, and five granddaughters.

Patricia Ann Piersol Pacinelli, on May 26, 2018. Patricia is survived by her husband of 59 years, Dr. Ralph N. Pacinelli, her siblings, Joan and Barry, her niece and nephew, and her five great nieces and nephews.

1960s

Patricia H. Rathbun, HUP'60, of Willow Grove, PA on April 10, 2018. Pat worked as a surgical nurse at Warren Hospital and later for the Lynch Home in Willow Grove, PA. She enjoyed her time with her church, traveling, gardening, and attending concerts and shows. Pat was predeceased by her husband, Rodney, and is survived by her siblings, children, and grandchildren.

Maria Antonia Rivera Briney, Nu'61, of Hinsdale, IL on January 27, 2018.



▲ **Evangeline Roberta Coeyman, Nu'61**, of Emmaus, PA on August 6,

2016. Evangeline was a 2nd Lieutenant in the Army Nurse Corps where she was deployed to Europe shortly after D-Day in 1944. Her field hospital unit followed General Patton across Europe where she saw Paris at liberation, the Battle of the Bulge in Belgium, and the Mauthausen-Gusen concentration camp. After Europe, she joined St. Luke's School of Nursing where she went from head nurse, to supervisor, and eventually, to instructor. She became Faculty Emeritus in 2006, and a scholarship was created in her name. She was often recognized for her service and received the prestigious Lillian K. Keil Military Nursing Award in 2009 and the French Legion of Honor in 2010. She is survived by her two sisters, daughter, and two grandchildren.

Suzanne Wine Fritz, Nu'61, on November 21, 2017. After graduating with her degree in nursing, Sue worked as an RN in Atlanta, GA. Upon retirement, she volunteered as a nurse at Volunteers in Medicine. She enjoyed playing tennis and bridge and being active with many clubs and committees. She is survived by her husband, children, and grandchildren.

Muriel W. Seabreeze, Nu'61, of Jacksonville, FL on November 17, 2017. Muriel was a registered nurse and specialized in rehabilitation and home care. She was a community nurse for the City of Philadelphia and a school nurse for the School District of Philadelphia. While at Penn, she was a member of the Drama Guild of Experimental Theater. She is survived by her four children, seven grandchildren, and two great-grandchildren.

Angela (Messina) Meyer, GNU'62, of Brick NJ on March 6, 2017. Angela was a professor of nursing at Seton Hall University and Ocean County Community College. She and her husband, Clarence, loved gardening, fishing, and

boating. They traveled the world together, visiting Africa, Europe, the Arctic Circle, Iceland, and most of the fifty states. She was preceded in death by her husband and brother. She leaves behind two sisters, two step daughters, two grandchildren, four step great-grandchildren, and various nieces and nephews.

Mary (Logan) Morris, GNU'63, of Drexel Hill, PA on March 25, 2018. Mary taught nursing at Misericordia Hospital and Gwynedd Mercy University. Later, she was a school nurse at Manoa, Sacred Heart, and St. Denis schools. Mary is predeceased by her husband, William, her daughter, Kathleen, and her siblings. She is survived by her children William, Maureen, Stephen, Patricia, and Daniel, twelve grandchildren, five great-grandchildren, and many nieces and nephews.

Rita E. Grygus, GNU'66, of New Britain, CT on April 2, 2018. Rita was the director of the Meriden Wallingford School of Nursing and later the Hospital's director of nursing services. Later, she became the supervising nurse consultant for the State of Connecticut Department of Public Health for 16 years and was a member of the New Britain Board of Health. She was very involved with the Hospital for Special Care where she served on many boards and committees and co-founded the Joy of Art Program. She is survived by her aunt, two godchildren, many cousins, extended family, and close friends.



▲ **Janette L. Packer, GNU'66**, of Newtown Square, PA on February 25, 2018. Jan began

her nurse training at the age of 16 in London. After coming to the United States in 1955, she worked at Cooper Hospital in Camden. She earned her master of science in nursing from the University of Pennsylvania and a doctorate in education from Temple University. In 1974, Jan was appointed associate professor at the University of Pennsylvania and created a doctoral degree program in nursing for the Graduate School of Education. In 1978, she became dean of the nursing school at Widener University until she retired in 1998.

Jan is survived by her wife, close friends Sheryl and Jan Somerville, two nephews, and a large extended family.

Jean Carolyn Balliet, Nu'67, GNu'69, of Lehigh, PA on February 6. Jean was the head nurse at the Hospital of the University of Pennsylvania's Orthopedic Operations Room for five years. Later, she worked as a consultant for the State of Pennsylvania and the assistant director, and later director, of the Williamsport Regional Medical Center. She is survived by her sister-in-law, three nieces and nephews, eight great-nieces and nephews, and five great-nieces and nephews.

Margot Jeffer, Nu'67, of Clyde, NC on June 21, 2018. Margot specialized in child psychiatric nursing and worked in the Child Psychiatric Program at the UNC Medical Center. She is survived by her brothers Edwards, Bruce, David, and Arnold.

Allen George Watkins, Nu'67, of Flower Mound, TX on March 13, 2018. Allen was a naval medical officer in the Vietnam War where he was stationed at Yokosuka Base in Japan. After being honorably discharged with the rank of naval LT officer, he graduated from Palmer Seminary with his M.D.IV degree and became a minister. He continued to work in nursing and later on went on to teach nursing at South Texas

College. Allen is survived by his siblings, former wife, two children, and many cousins, family, and friends.

Sondra "Sandi" (Bootel) Feder, Nu'68, on March 17, 2016.

Joan Prusko, Nu'68, of Sapulpa, OK on October 30, 2017. Joan spent many years as a flight nurse and a pediatric nurse practitioner in the United States Air Force. She achieved the rank of Colonel before she retired in 1982. She is survived by her spouse, siblings, and a large extended family.

1970s

Regina "Jean" Quinn, GNu'70, of Springfield, PA, on November 18, 2017. Throughout her nursing career, Jean worked at various area hospitals, including a 22-year stint at Mercy Fitzgerald Hospital in Darby Borough where she served as patient care coordinator, clinical nurse specialist, and clinical nurse educator. She also held key leadership positions in the nursing departments at Lankenau Medical Center, the Philadelphia VA Medical Center, and Bryn Mawr Hospital.

Jean was also on faculty at the University of Pennsylvania where she was a teacher and coordinator for courses in leadership roles in nursing, senior medical/surgical nursing, and fundamentals in nursing. She is survived by two nieces, a nephew, and her extended family.

Juanita Watson, Nu'70, GNu'73, of Cherry Hill, NJ on April 18, 2018. Juanita studied medical-surgical nursing at the University of Pennsylvania and received her PhD from New York University. She enjoyed traveling, Broadway musicals, classical music, and spending time with her family.

Maryanna Niemczyk, Nu'72, GNu'78, of Birdsboro, PA on May 3, 2016. Maryanna

was nursing faculty at St. Joseph's Hospital School of Nursing, St. Francis DeSales College of Allentown, and Kutztown University from which she retired as Emeriti Professor in 1998.

Annamarie Rossanese, Nu'72, GNu'79, of Skippack Township, PA. She was preceded in death by her husband, Maurino, and is survived by her children, great-grandchildren, nieces, and nephews.

Susan Cohen, Nu'73, of Pittsburgh, PA on June 12, 2018. Susan was an instructor at the University of Pennsylvania School of Nursing in the Health Care of Women Program, where she continued on to become an assistant professor and the director of the Health Care of Women Program. She was a fellow in the American Academy of Nursing and was on faculty of the University of Pittsburgh School of Nursing, Department of Health Promotion and Development, since 2002 where she was a tenured associate professor.

Theresa Ann Couture, Nu'74, of Randolph, MA on March 19, 2018. Theresa was the school nurse at Lyons Elementary school for 18 years, retiring in 2017.

1980s

Shirley Ann Smith, GNu'80, of Wilkes-Barre, PA on August 19, 2017. Shirley was a clinical specialist at the Wilkes-Barre VA Medical Center where she pioneered and implemented an inpatient hospice program, an outpatient chemotherapy clinic, and various counseling and educational services. After her retirement, she authored the award-winning book, "Hospice Concepts" A Guide to Palliative Care in Terminal Illness" and established a free medical clinic at her church. She is survived by her husband, daughters, siblings, and grandchildren.

Elizabeth Ann Rettew,

GNu'81, of Canton, OH on November 9, 2017. Beth was an Associate Professor of Nursing at Malone University, where she taught for 26 years. She also worked at the Tuscarawas Clinic for the working uninsured. Beth is survived by her parents, Richard and Anna, her siblings, and her many nieces and nephews.

Barbara Zalkind, GNu'84, of Trevese, PA on May 24, 2017.

Kathleen (Munda) McNamara, GNu'87, on January 4, 2018.

1990s

Amando "Mando" S. Herrera III, Nu'91, of San Antonio, TX on April 8, 2018. Mando began his career as a cardiac care nurse and later became a care coordinator, PACU nurse, and a director. He was published in the American Nursing Journal. He is survived by his partner, mother, siblings, and numerous nieces, nephews, family, and friends.

2000s



Julie Fisher Pisa, wife of Michael A. Pisa, Nu'05, GNu'07, on July 15, 2018. Julie graduated from Temple University and was an early intervention occupational therapist in King of Prussia. She enjoyed the beach, sailing, and spending time with her friends and family. Julie was universally loved, and she holds a special place within the 2005 Penn Nursing ABSN cohort.

Path

Sue Keim PHD MSN MS CRNP



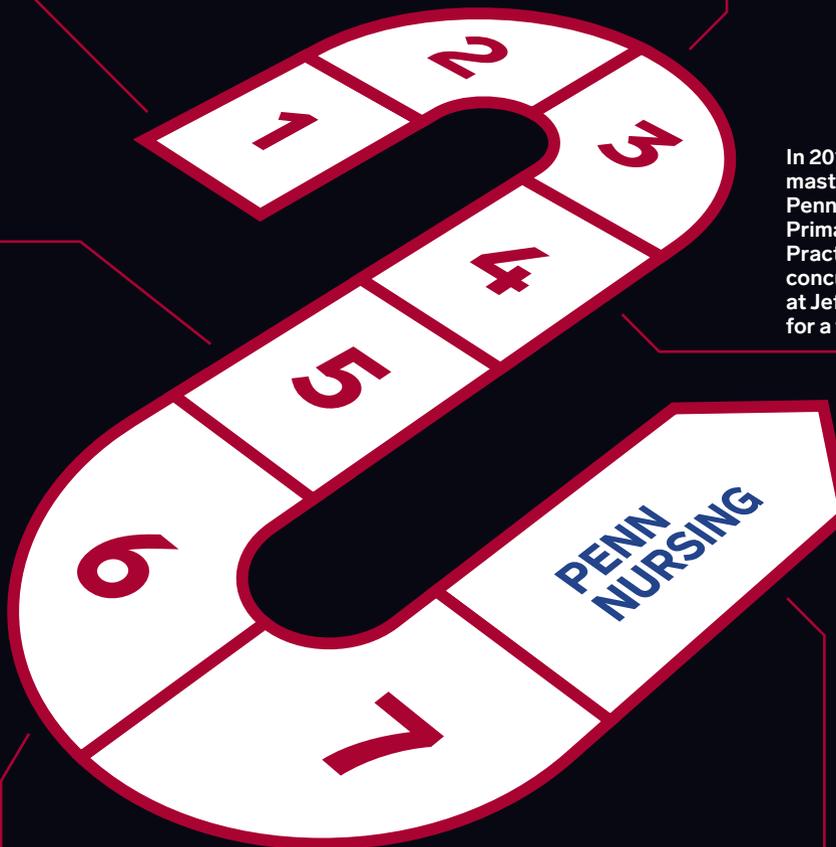
Program Director, Nursing & Healthcare Administration and Health Leadership Graduate Programs
Co-Vice Chair, Biobehavioral Health Sciences Department
Senior Fellow, Leonard Davis Institute of Health Economics



Initially works as a clinical nurse in the Oncology Center and Coronary Care Unit at Johns Hopkins Hospital. Interested in leadership development and pursues first master's degree at University of Maryland in Nursing Administration.

Becomes a nurse manager of multiple units, and promoted to Assistant Director at Hopkins in the Department of Medicine, overseeing seven inpatient and two intensive care units, as well as outpatient clinics.

At Hopkins School of Nursing, teaches a senior leadership undergraduate class, then relocates with family and joins Penn Nursing. In 2006, becomes Associate Director for the Nursing & Healthcare Administration/Health Leadership graduate programs.



In 2011, as Program Director for the NADM/HLMP programs, creates coursework in Negotiations, Human Resources, and a dual degree with the Law School. Since taking the helm, program(s) ranked #1 by U.S. News and World.

In 2011, obtains a second master's degree from Penn's Adult-Gerontology Primary Care Nurse Practitioner program and concurrently practices at Jefferson Medical Care for a few years.

Stemming from experience in hospital administration and as a primary care nurse practitioner, becomes interested in improving care delivery methods across the care continuum, leading her to enroll in Penn Nursing's PhD program.

Graduates with PhD in 2018, receives the Sigma Theta Tau PhD Student Leadership award. Dissertation examines factors associated with readmissions and return emergency room visits, and receives the AMIA Nursing Informatics Student Paper Award.

Currently also a LDI Senior Fellow and Vice Chair in the BHS Department at Penn Nursing, she is leading the effort to launch Penn's post-master's DNP in Executive Leadership in Fall 2019.

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