





Dear Alumni and Friends,

I hope that this issue of the USC Chan Magazine finds you as healthy, safe and occupational enriched as possible. What more can be said about life these days? The confluence of racial, economic and public health pandemics have utterly transformed our classrooms and campuses, roles and relationships, perspectives and paradigms, and our habits and health. The forthcoming Spring/Summer 2021 magazine issue will detail the Justice, Equity, Diversity and Inclusion (also known as "JEDI") work happening at USC Chan.

In this issue, on p. 12, read about a new course giving the much-needed time and space to process the pandemic through an occupational perspective. On p. 14, meet a successful Lifestyle Redesign client and her USC Occupational Therapy Faculty Practice clinician, partners who are successfully orchestrating everyday occupations in the pursuit of better health and quality of life. And on p. 18, USC Chan faculty member Carnie Lewis recounts, season by season, her 2020 as a frontline occupational therapist in the COVID care units at Keck Hospital of USC.

While situations change daily, know that USC's commitment to excellence in occupational therapy and occupational science is steadfast. It's a commitment that has made USC Chan home to the No. 1-ranked occupational therapy educational program in the country, according to U.S. News & World Report. It's a commitment underlying every email chain, group text and Zoom meeting. It's shown by educators who are teaching with unparalleled innovation, creativity and responsiveness. It's our staff members working around the clock to keep us running as smoothly as possible. It's our students tapping their deepest reservoirs of resilience, patience and resolve. It's the selflessness, determination and compassion of every occupational therapy practitioner, whether your frontline is on the ground or on a screen.

Who can guess where 2021 takes us as a Division, as a profession and as a nation? But what I do know is that together — USC faculty, staff, students, alumni and friends — we can continue harnessing the restorative power of occupations to help heal individuals, groups and communities. Be well, and as always, Fight On!



Grace Baranek

Grace Baranek PhD, OTR/L, FAOTA

The magazine of the USC Mrs. T.H. Chan Division of Occupational Science and

Associate Dean, Chair and Professor USC Mrs. T.H. Chan Division of Occupational Science and Occupational Therapy Herman Ostrow School of Dentistry of USC

JSC Chan MAGAZINE

ASSOCIATE DEAN **AND CHAIR GRACE BARANEK**

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DIRECTOR OF EXTERNAL RELATIONS MIKE McNULTY '06, MA '09, OTD '10

HAND-LETTERING KATY DOCKRILL/i2i ART

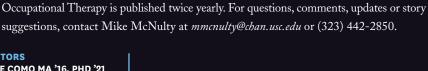
PHOTOGRAPHY

HANNAH BENET RICARDO CARRASCO III PHIL CHANNING **NATE JENSEN CARNIE LEWIS '17,** MA '18, OTD '19 JOHN LIVZEY

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DESIGN JHK CREATIVE





LESSONS LEARNED | P. 12

While COVID-19 has drastically disrupted higher education, faculty member Rebecca Aldrich found one way to make sense of unprecedented times — she created a new course to study the pandemic's impact on peoples' health, occupations and well-being.

PAIN AND PLEASURE | P. 14

The pain got to the point that 67-year-old former investment manager Kim Michalski had to go on disability leave. But by connecting with a USC occupational therapist through in-person and telehealth consultations, she is now managing her symptoms to maximize her quality of life.

DEPARTMENTS

UP FRONT | P. 5

Work-from-home health effects, by the numbers; 3D printing of masks; Time for a redesign; Students surprised to discover family ties; Film set COVID safety officer; Alumnus assumes OTAC presidency; Four Trojans among 2021 AOTA Fellows; Campus tour goes virtual

NEWS BRIEFS | P. 9

NEWS | P. 10

One of USC Chan's newest faculty members — neonatal therapy expert and research scientist Bobbi Pineda — studies high-risk and premature infants and their families in the NICU.

5 THINGS TO KNOW ABOUT: ASST. PROFESSOR AMBER ANGELL PHD '16 | P. 11

RESEARCH BUZZ: TO DO UNTO OTHERS | P. 16

GENNEXT:
GABRIEL CRAVENS '18, MA '21
I P. 17

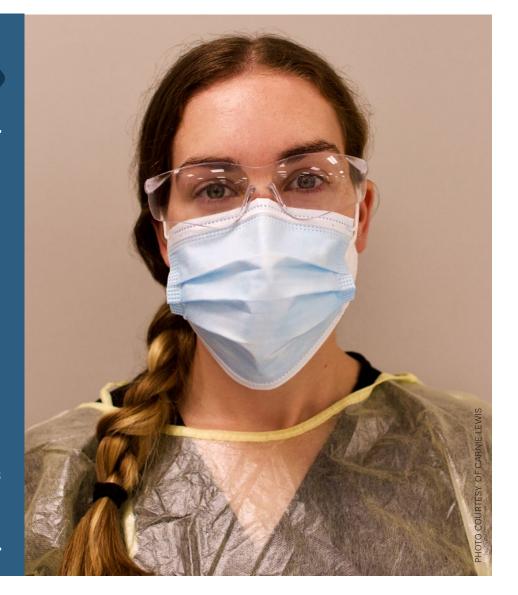
IN PRINT:
PRECARIOUS ON PAPER | P. 26

A DEEPER MEANING: BOARD OF COUNCILORS MEMBER SUSAN KNOX MA '68, PHD '97 I P. 28

COVER STORY

THE LONGEST YEAR | P. 18

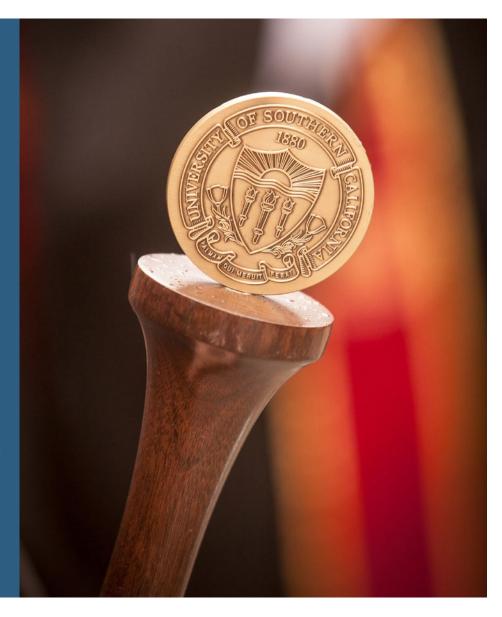
For so many frontline health clinicians around the nation and world, 2020 felt like the longest year of their entire careers. From the earliest hints of coming calamity in the spring, to receiving her first dose of the COVID-19 vaccine in December, inpatient occupational therapist and USC Chan faculty member Carnie Lewis looks back at what felt like the longest year.



DIVISION TAKES TOP RANKING

USC is again home to the No. 1 occupational therapy educational program in the country, according to *U.S. News & World Report's* Best Grad Schools 2020 rankings. "There are so many people — faculty, staff, students, alumni, partners and collaborators — who work day in and day out to make USC Chan the extraordinary place that it is," said Associate Dean and Chair Grace Baranek. "This national recognition reinforces our collective talents and leadership in the field of occupational therapy."

U.S. News' ranking is determined by a survey of top educators and administrative faculty at the nation's accredited occupational therapy master's and doctorate degree programs. Survey respondents rated the academic quality of programs on a scale from 1 (marginal) to 5 (outstanding). Along with USC, respondents also gave Boston University top marks.



CONTRIBUTORS



Dominique Como MA '16, PhD '21 Writer, Research Buzz, p. 16 Meaningful occupations:

Traveling, spending time with family and friends, crafting, trying new foods, reading and watching movies.

How has the pandemic affected your occupations? My family has connected virtually via our "family Zoom" in ways that used to be reserved only for special events. I miss seeing them in person, but appreciate how we have found ways to stay connected.



Calvin Lee MA
'21
Writer, Lessons
Learned, p. 12;
Interviewer, 5
Things to Know
About, p. 11

About writing Lessons Learned:
It gave me the opportunity to
understand how occupations are
continuing to be disrupted, and
what role occupational therapy
and occupational science can
play during a pandemic.

How has the pandemic affected your occupations? It has definitely limited the chances for me to engage in a lot of in-person activities, but it's also given me the time to pick up new hobbies like playing the guitar!



Carnie Lewis
'17, MA '18,
OTD '19
Writer, The
Longest Year,
p. 18
Meaningful

occupations: Making ice cream and baking — my best creations are blackberry and vanilla ice cream, and chocolate chip cookies that take 48 hours.

About writing The Longest Year: I think I needed an outlet to process all my thoughts and experiences from the chaos of the last year, and this was the perfect medium to do exactly that.



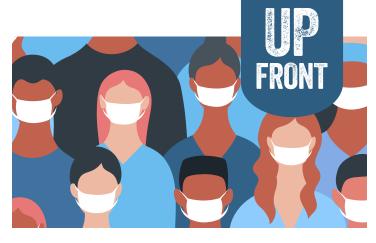
Jamie Wetherbe
MA '04
Writer, Pain and
Pleasure, p. 14
Work has
appeared in:
Los Angeles

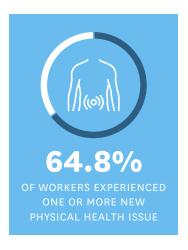
Times, The Huffington Post, City of Hope

Meaningful occupations: Mom to my son, Kingston.

How has the pandemic affected your occupations? Learning how to share a home office with my wife and 3-year-old!

What impact has working from home during COVID-19 made upon our health? For evidence-based answers to that question, a team of USC researchers, including USC Chan Associate Professor Shawn Roll, surveyed nearly 1,000 people during the early phases of the pandemic about the impact of working from home upon their physical and mental well-being. Their survey results, published in a new article in the Journal of Occupational and Environmental Medicine available at *tinyurl.com/joem-survey*, show that:



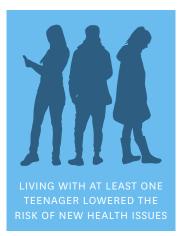


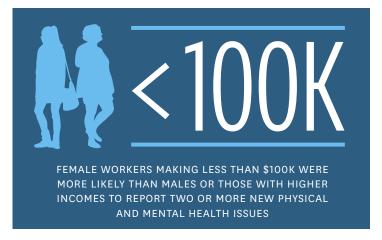








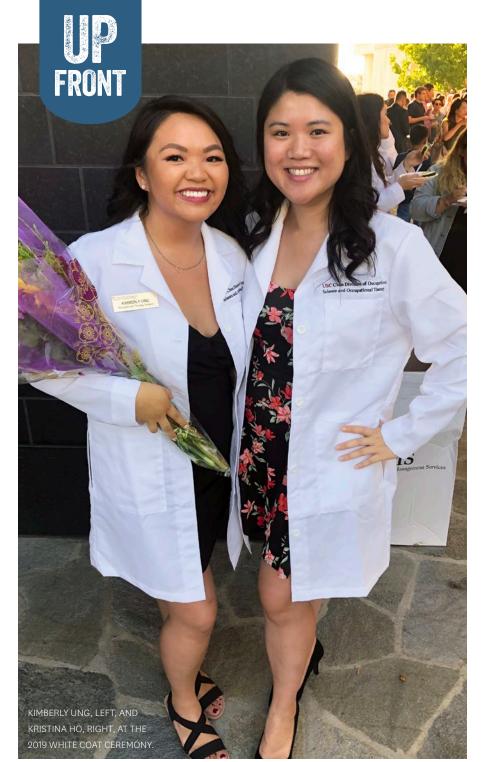












A FAMILY TIES SURPRISE

Professional program students **Kristina Ho** MA'21 and **Kimberly Ung** MA'21 made a truly unexpected family connection. As retold by Ung.

Kristina and I met each other during our first semester at USC Chan, when she accidentally stepped on my shoes (she apologized)! But we did not officially get to know one other until we started sitting together in kinesiology class. At first, it started off as small talk. One day, Kristina asked me about my family. I told her that I am Chinese, but that my parents are from Vietnam. Kristina said, "Me too!" She then asked what language my family speaks. I told her that we speak a really unfamiliar dialect of Chinese called Hakka Ngái. "Me too!," Kristina said. We laughed, and casually said that we were probably related!

We became closer friends throughout the semester, and at the 2019 White Coat Ceremony we wanted to take photos together. That was when our families met, and we told them about our similar backgrounds. My father began talking to Kristina's siblings in Hakka Ngái. Kristina's father was not present at the White Coat Ceremony, but after Kristina's sister revealed his Chinese name, my dad immediately recognized it — my dad knew Kristina's dad!

Afterwards, Kristina called her dad to explain what happened. He also recognized my dad's Chinese name, and said that they hadn't seen one another since leaving Vietnam as teenagers about 40 years ago! We exchanged pictures of our fathers and other relatives to confirm they are indeed related. From there, we actually discovered that our grandparents were cousins! They all come from a small village in Vietnam where our fathers' families lived for generations.

Unfortunately, we do not know specific information about our roots because our parents do not share details about life back in Vietnam, even when specifically asked. But how incredible is it to think that USC occupational therapy brought us randomly together, and that we could have a family reunion halfway around the world after four decades?!

VIRTUAL REALITY CAMPUS TOUR NOW AVAILABLE

Commodities, entertainment, communication, events and more — the pandemic has made so much of everyday life "go virtual." Add USC Chan to that list. Thanks to a new virtual reality tour app, campus can come to any screen near you!

Take a virtual tour of the Center for the Health Professions using your iOS or Android device at *chan.usc.edu/about-us/virtual-tour* and get a 360-degree experience using a compatible device such as a Google Cardboard VR viewer. Download the free app — built by Assistant Professor **Sook-Lei Liew** MA '08, PhD '12 and the USC SensoriMotor Assessment and Rehabilitation Training in Virtual Reality Center — by searching for "USC SMART-VR" on the iOS App Store or Google Play for Android devices.





SAFETYVIZ, A SPACE VISUALIZATION AND PLANNING TOOL (SCREENSHOT COURTESY OF DIGITALFILM TREE)

"SAFETY ON THE SET!"

How does 'COVID-19 Safety Officer' sound as an emerging area of occupational therapy practice? Catherine Shin MA '19, OTD '20 was recently designated as one during production of a short video by the Entertainment Technology Center at USC.

Like so many industries, film production studios have been adapting to the challenges posed by the coronavirus pandemic. One protocol put into place is a safety officer — a crew member in charge of planning, workflow and data management in order to keep cast and crew as safe as possible while working. With sophisticated software, on-set and remote applications, checklists upon checklists and a litany of contingency plans, Shin was responsible for maximizing on-set safety compliance. Good thing, too — her response was swift and effective after what seemed like the inevitable first positive test result.

"We had already started monitoring crew and keeping logs," Shin explained. "After confirming [the positive test], we immediately implemented contact tracing protocols. We initiated mass testing of everyone [who had been in contact with the infected person]. Within 48 hours, all were tested and cleared of the virus. ... We could safely proceed in a COVID-free environment."

Follow Shin on Instagram at @ occupationalgirl and read The Hollywood Reporter article about Shin's role in COVIDconscious film production at tinyurl.com/ safety-on-set.

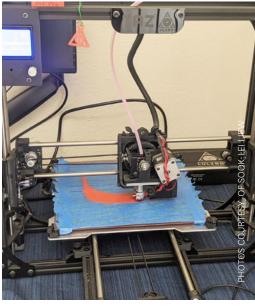
MASK-MAKER, MASK-MAKER, **MAKE ME A MASK**

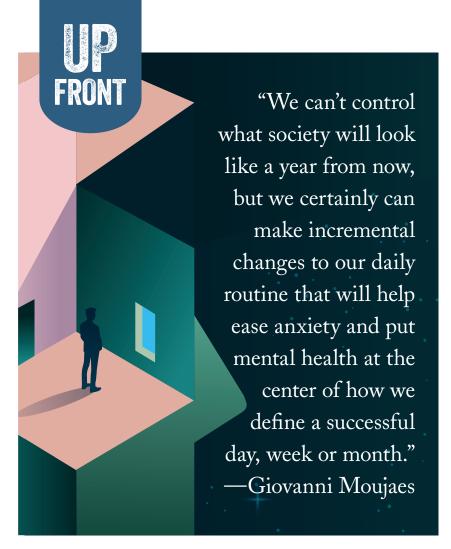
When personal protective equipment came into short supply during the early phases of the pandemic, Assistant Professor Sook-Lei Liew MA '08, PhD '12 leapt to action.

As director of the Neural Plasticity and Neurorehabilitation Laboratory, Liew and her team were more than familiar with 3D printing and fabrication. Their DIY effort was one of many undertaken by Trojans across the university to help keep health care providers safe at Keck Hospital of USC, which then assembled, sterilized and distributed finished PPE to employees.

"3D printing is a great fit for occupational therapy — it's basically crafts with a computer," Liew wrote on the NPNL Lab's Twitter account at @npnlatusc.







Moujaes, a video producer at Los Angeles' KTLA-5 television station and a former Occupational Science minor student during his USC undergraduate years, ponders lifestyle changes amidst the pandemic.

"About two months ago, I decided it was time for a 'lifestyle redesign' of my own," Moujaes wrote. "My goal was to use the added time I had during quarantine to address any bad habits I carried into the pandemic; find better ways of managing anxiety, health and happiness; and learn a new skill."

Read Moujaes' article "It's Time for a Lifestyle Redesign" at tinyurl.com/redesign-time.



BRYANT EDWARDS BECOMES OTAC PRESIDENT

In 2020, alumnus **Bryant Edwards** MA '05, OTD '06 assumed the office of president of the Occupational Therapy Association of California. Edwards became the fifth Trojan to hold the position, following in the footsteps of **Heather Kitching** MA '02, OTD '10, **Patricia Nagaishi** MA '80, Board of Councilors member **Shawn Phipps** '97 and the late **Melissa Szamet** '68.

"My goal for the next year in my work with OTAC is to continue to support our occupational therapists, occupational therapy assistants and our students as they navigate practice within the everchanging landscape of this pandemic," Edwards said. "I am also intent on facilitating meaningful change within our association to address diversity, equity and inclusion needs."



FOUR TROJANS JOIN AOTA ROSTER OF FELLOWS IN 2021

Four alumnae, including one current faculty member, have been named 2021 inductees to the American Occupational Therapy Association's Roster of Fellows. The honor recognizes those occupational therapists who have made significant contributions over time to the profession, with measured impact on consumers of occupational therapy services or members of the association.

Arameh Anvarizadeh '05, MA '06, OTD '07 is the USC Chan Division's director of admissions and an associate professor of clinical occupational therapy. She has held various leadership positions within AOTA and the Occupational Therapy Association of California, and is a founding member and the vice chair of the non-profit organization Coalition of Occupational Therapy Advocates for Diversity.

Julie Bissell MA '79, OTD '12 is an occupational therapist with the Anaheim Elementary School District and a former USC Chan adjunct associate professor of clinical occupational therapy. She was one of the first to establish occupational therapy in California public schools, has held leadership positions with AOTA and OTAC and currently co-chairs OTAC's School-Based Practice Committee.

Heather Kitching MA '02, OTD '10 is the coordinator of the master's degree in occupational therapy program at Cal State University, Dominguez Hills, and is the most recent past president of the Occupational Therapy Association of California.

Lisa Test MA '89, OTD '09 is the coordinator for occupational therapy and physical therapy at the Los Angeles Unified School District. She has frequently served OTAC in various volunteer capacities, and most recently, the Lisa A. Test Endowed Scholarship and Endowed Research Awards were established at USC Chan in her name to support the future of our profession.



News Briefs

Lectures, grants, awards — there's always so much going on at the USC Chan Division of Occupational Science and Occupational Therapy. Keep your finger on the pulse with these division news briefs:

AOTF HONORS FACULTY, POSTDOC

Three USC Chan faculty members have been honored with annual awards from the American Occupational Therapy Foundation.

PhD Program Director and Associate Professor Shawn Roll was named to the AOTF Academy of Research in Occupational Therapy, a recognition of exemplary contributions to the science of occupational therapy. Roll has published more than 40 peer-reviewed manuscripts, and his total grant funding to date is \$3.86 million.

Assistant Research Professor Leah
Stein Duker MA '06, PhD '13 was named a
recipient of the A. Jean Ayres Award, which
recognizes theory- and research-related
scholarship in occupational therapy and sensory
processing. The award is named after USC
alumna and one-time faculty member A. Jean
Ayres '45, MA '54. Stein Duker studies how
tailored environmental modifications alleviate
behavioral stress, physiological distress and
pain in children — including autistic children
— undergoing difficult healthcare procedures.

Associate Chair of Research and Professor Mary Lawlor received the Meritorious Service Award. Lawlor completed her term as chair of the AOTF Board of Trustees in 2020.

Postdoctoral scholar Emily Kilroy PhD '18 received the 2021 Nedra Gillette Endowed Research Fellowship. Kilroy studies the neural correlates of sensory processing in autism.

Alumna M. Pollie Price MA '94, PhD '03 also received a Leadership Service Commendation. The awards are presented during the American Occupational Therapy Association's annual conference.

KINGSLEY TAPPED AS DIVISION'S FIRST DAE DIRECTOR

Associate Clinical Professor Karrie Kingsley MA '01, OTD '07 has been named the first Director of Diversity, Access, and Equity of the USC Chan Division. In this role, Kingsley coordinates the division's DAE activities, including formal and informal groups, educational opportunities and social events.

The administrative appointment builds upon Kingsley's longstanding efforts toward strengthening the sense of community, representation and inclusion at USC Chan. Since 2018, Kingsley has served as the nominated chair of the division's DAE Committee, which strives to ensure all faculty, staff and students feel valued and supported, and are prepared to meet the diverse needs of individuals, populations and the profession.

NIH AWARDS F31 TO PHD STUDENT

Student Dominique Como MA '16, PhD '21 received a NIH Ruth L. Kirschstein Predoctoral Individual National Research Service Award, commonly known as a F31, from the National Institute of Dental and Craniofacial Research. The two-year, \$92K fellowship provides full support for Como's engagement in training and research activities as part of her PhD program.

Como is using an occupational perspective to explore oral health disparities, an important yet often neglected component of overall health. The fellowship also includes enhanced education and training. Read more about Como, who is being mentored by Professor Sharon Cermak, and her research on p. 16.

STUDENT JOINS AOTA TASKFORCE

Elissa Lee MA '19, OTD '20 was selected to the American Occupational Therapy Association's Diversity, Equity, and Inclusion Task Force, a 20-member body developing goals and outcomes for the association's diversity and inclusion initiatives during the next three years. The task force will develop a strategic plan that will be presented to AOTA's Board of Directors in early 2021.

"I'm humbled to serve on the AOTA Diversity, Equity, and Inclusion Task Force, which aims to contribute to tangible, meaningful changes to dismantle structural racism and other inequities through a holistic approach," Lee said.

APPLICATION IN FOR ENTRY-OTD MOVE

The division has formally initiated the Accreditation Council for Occupational Therapy Education® process to transition the entry-level master's program to an accredited, entry-level clinical doctoral (OTD) program. For more than two years, faculty and staff have been engaged in dialogues with stakeholders to develop the new doctoral curriculum. The transition is slated to occur for the 2022 application cycle (the inaugural cohort of entry-level OTD students apply in 2021).

Entry-level OTD students come from a variety of educational backgrounds and experiences. What they share in common is that they have not previously graduated from an accredited occupational therapy program. Entry-OTD programs are distinguished by their Doctoral Capstone Experience, which follows the completion of core courses and Level II fieldwork experiences. The DCE at USC is envisioned as a pathway for students to develop individualized learning experiences in clinical practice, research, policy and advocacy, administration or pedagogy.

Frequently asked questions about the transition to the entry-level OTD are available at *chan.usc.edu/admissions/fags*.

NEW PCORI PROJECT TO INCREASE TRUST IN AUTISM RESEARCH

Many researchers still do not understand the problems facing individuals with autism spectrum disorder across the lifespan, particularly those related to sensory processing. A new two-year, \$243K grant from the Patient-Centered Outcomes Research Institute led by Associate Chair of Research and Professor Mary Lawlor aims to narrow those knowledge gaps.

"Transforming Research: Understanding Sensory Experiences in ASD, Stakeholders Working Together" — or "TRUST" for short — will establish a sustainable, impactful and replicable alliance of stakeholder groups, including family members, caregivers, self-advocates, clinicians and researchers. The goal is to promote innovative and effective approaches for addressing sensory processing challenges, improve outcomes for autistic people and inform patient-centered outcomes research and comparative effectiveness research.

NEONATAL THERAPY EXPERT JOINS USC CHAN

Certified Neonatal Therapist and research scientist Bobbi Pineda studies high-risk and premature infants and their families in the NICU.

BY MIKE McNULTY '06, MA '09, OTD '10

Every year in the U.S., approximately 500,000 babies are born before reaching 37 weeks of pregnancy. The earlier the gestational age, the higher are the risks to the infant, including disability and mortality.

"Just being born early changes brain development permanently," said Assistant Professor Bobbi Pineda, who recently joined the faculty of the USC Chan Division of Occupational Science and Occupational Therapy. "With higher risks and a period of rapid brain development that is unfolding in the NICU, we have a profound opportunity [in neonatal care] for improving outcomes."

Pineda knows about optimizing outcomes during the earliest days of life outside the womb. She is a research expert in neonatal intensive care units, where she has studied factors that can influence outcomes, such as environmental stimulation and noise, language exposure and parenting.

Before coming to USC Chan, Pineda was a faculty member at Washington University School of Medicine in St. Louis' Program in Occupational Therapy, where she built a clinical research program studying modifiable factors in the NICU to improve early outcomes.

Her research questions are driven by her previous clinical experience at some of the nation's premier children's hospitals, including University of Florida Shands Hospital, All Children's Hospital in St. Petersburg, Duke Children's Hospital and University of North Carolina Children's Hospital. In recognition of her contributions to the field, the National Association of Neonatal Therapists honored Pineda for her work over the past decade ending in 2019 by adding her to their decade-by-decade list of luminaries who have advanced neonatal care since the 1970s.

Specialized practice for special patients

Today, occupational therapy in the NICU is a specialized area of practice for an especially vulnerable population. According to Pineda, neonatal therapists approach clinical problems from two complementary perspectives.

From a neuroprotective perspective, therapists adapt the NICU environment to decrease stressors and protect the brain, provide supportive positioning, optimize sensory exposures and help parents achieve the role of parenting a fragile infant with confidence and social connectedness. From a problem-based or rehabilitative perspective, neonatal therapists make clinical observations,

use standardized assessments, customize goals and interventions and provide targeted treatment approaches. While addressing the infant and family needs at the NICU bedside, neonatal therapists are continuously considering multiple different issues, and constantly changing therapeutic processes in light of these complex factors.

Because it's such a specialized area of practice with few researchers, it can feel isolating at times. The prospect of connecting with established occupational therapy researchers — like Associate Dean and Chair Grace Baranek, Professor Sharon Cermak and Associate Chair of Research and Professor Mary Lawlor, who have longstanding projects and ties with Children's Hospital Los Angeles — is one of the reasons Pineda says she decided to join USC Chan.

"Doing research related to pediatric OT, and more specifically in the NICU, can sometimes feel like being in a vacuum. While my previous collaborators have largely consisted of other medical professionals such as neurologists, neonatologists and psychologists, it will be fascinating to have other OT researchers here at USC that I can bounce ideas off of, and that will help me advance science," Pineda said. "Im just thrilled to be at [USC] — the birthplace of sensory integration — especially due to its important ties to the early sensory environment of the NICU."

Narrowing the research gap

Pineda spent nearly a decade working as an occupational therapist in mostly inpatient pediatric settings before pursuing a research career. It was a decision, she says, motivated in part by realizing the need for more research to inform practice following the premature birth of her own child.

Since earning her PhD degree in rehabilitation science from the University of Florida in 2006, her work has focused almost exclusively on the NICU setting. Her ultimate goal is to contribute research that will build the science to support best clinical practice in the NICU.

"I want to research so many things, because there are just so many needs," she said.

Her current projects revolve around three areas of study.

First, the Supporting and Enhancing NICU Sensory Experiences, or "SENSE" program, is a comprehensive program to ensure that high-risk infants in the NICU are afforded positive sensory exposures such as massage, auditory sounds and skin-to-skin contact by parents every



day of NICU hospitalization. The program also educates families and caregivers on providing those positive sensory experiences appropriately at each developmental stage. Nearly 200 hospitals in the U.S. and abroad have purchased the SENSE program license. Pineda says her next project is to get a better understanding of how the program is being delivered across different NICUs, identifying barriers and facilitators to its implementation and gauging its impact.

Pineda also studies neonatal feeding, and she developed a neonatal feeding assessment tool, the Neonatal Eating Outcome Assessment. Since feeding is one of the most important occupations during infancy, it's a line of research that has an exciting future and can make a large clinical impact.

Her third line of research includes what's known as the Baby Bridge program, a model that promotes timely, consistent and high-quality therapy services for high-risk infants after being discharged from the NICU. It is designed to "bridge" the time gap between NICU services and post-discharge early intervention therapies, often provided through state-funded programs.

Beginning in 2016, Pineda implemented the Baby Bridge program as a research study in partnership with St. Louis Children's Hospital. Results identifying its successful implementation and improvements in access to care were published last year in the *Journal of Early Intervention*. Pineda and her colleagues found that Baby Bridge not only achieved its key features, it resulted in infants who were born at or before 30 weeks receiving early therapy services on average 85 days earlier than they otherwise would have.

In addition to the National Association of Neonatal Therapists' recognition of her influence, Pineda was recently named a recipient of both an Innovation Award and an Impact Award, two new annual honors bestowed by the National Board for Certification in Occupational Therapy to highlight outstanding, certified practitioners. She's building a legacy that will continue growing through the next stage of her career at USC Chan.

"What I've really strived for, and what I hope that I'll be remembered for 10 years from now, is driving neonatal therapy practice towards evidence," Pineda said. "Evidence will establish more credibility for the important work of the neonatal therapist, and will ensure that we are doing interventions that will drive positive outcomes for infants and families who start their lives in the NICU."

THINGS TO KNOW ABOUT:

Amber Angell PhD '16

BY CALVIN LEE MA '21

Assistant Professor Amber Angell — who earned her PhD in Occupational Science from USC Chan in 2016 - made a homecoming return this fall as the newest member to join USC Chan's faculty. Angell currently researches understudied and underserved groups of individuals on the autism spectrum, including Latinx and African American children, girls, women and adults with diverse gender identities. Here are five more things to know about Angell:

Angell discovered occupational therapy in high school thanks, in part, to a football connection. Angell always knew she wanted to work with kids and to be part of a helping profession. So her mom encouraged her to shadow an acquaintance, a pediatric occupational therapist whose husband also happened to coach Angell's brother's football team. "I remember being like, 'wow, she's playing with children, but skillfully and therapeutically,' and I just thought, 'yeah, this looks great to me!"



Research was never part of her original career plan. In her previous life as a practicing clinician, Angell's caseload often included individuals on the autism spectrum, a population that experiences various increased disparities. "As I was practicing, I was starting to observe inequalities, but I didn't necessarily have the language to put to it yet." She says that growing urge to address inequalities sparked her initial interest in pursuing a research career."

Training opportunities have taken Angell from coast to coast. She completed a two-year postdoctoral fellowship in translational and community-engaged research at the University of Illinois at Chicago, then served as a research assistant professor and Rehabilitation Research Career Development K12 scholar at the University of Florida. "These experiences gave me really strong qualitative and quantitative research skills with the goal for me to understand, measure and address autism disparities"

She loves Los Angeles, and couldn't be more excited to be back. Angell moved to Southern California for her very first job as a pediatric occupational therapist. Now, she's returned to Los Angeles as USC Chan's newest faculty researcher. "I was just delighted to be able to come back. I loved being in the division as a student, and I definitely felt like it was a family here."

Along with jogging, yoga and hiking, Angell's favorite occupations are those done alongside her son. "It's so nice to be back in L.A., where there are some really beautiful trails, and some of them are very familiar to me. I lived in a different neighborhood when my son was born, and I would hike with him as a baby. Now, it's so fun to take him back and he's really into it — he even has his own favorite trail now!"

Lessons Learned

A new course helps make sense of the pandemic by studying it.

BY CALVIN LEE MA '21

Next to healthcare, no industry has been more severely disrupted by the COVID-19 pandemic than education. When the USC Health Sciences Campus closed, USC Chan faculty members looked to find opportunity in the unfolding crisis — a new graduate-level course that covered, in real time, the pandemic's impact on peoples' occupations, health and well-being.

"The leadership team made an open call for any faculty who might be interested in helping," says Associate Professor Rebecca Aldrich '05, MA '06. "I had already been thinking about the impacts on people who are unemployed, and we've seen a lot of them play out over the last several months now."

After some brainstorming — via Zoom, of course — Aldrich was invited to not only create a new course but to teach it. As she began building its framework, Aldrich made calls around the world to occupational therapists and occupational scientists for their perspectives of the pandemic. It was in that spirit of collaboration that "OT 699: Occupational Innovations for Managing Well-Being and Everyday Life During a Pandemic" began taking shape.

In terms of format and focus, what became most apparent to Aldrich was the need for creativity and flexibility in the face of so many constraints imposed by "the new normal." The course would consider how occupational therapy practice, occupational science research and an overall occupational lens can contribute to a pressing emergent issue. It met a pragmatic need as well.

"When learning transitioned to the remote platform, we needed to provide an opportunity for our OTD residents to have some substitution for residency hours if they were in sites where hours needed to be reduced," Aldrich says. "That was really important because it provided a space for residents to continue thinking in ways that were steeped in their residency contexts."

Product placement

"OT 699: Occupational Innovations for Managing Well-Being and Everyday Life During a Pandemic" was made official in time for the Summer 2020 semester. The purpose of the doctoral-level course was to explore how an occupational perspective can be brought to bear on problems arising from the novel coronavirus pandemic. Run in the style of an ideas lab, it

combined guest lectures, pre-selected learning activities and student-generated materials to cover a range of disciplinary and professional perspectives. In lieu of a final examination to conclude the course, OT 699 students designed and pitched occupation-based, evidenced-informed products to meet various needs caused by the pandemic.

"While I was completing my residency with the Los Angeles Unified School District, I noticed that many of the challenges that students were facing involved not having enough resources for them to stay engaged in their homes," says Faith Hicks MA '19, OTD '20. "I knew that all students received technological devices and hotspots, so my ideas were focused on the online learning platform."

Hicks was inspired by teacher-created "Bitmoji classrooms" — customized, interactive online spaces complete with avatars that mimic in-person classroom experiences.

"I wanted to make something similar and tie it back to OT, so I built an online resource where kids can click on different images which take them to different links, games and outside resources related to fine motor learning, mindfulness, social skills and more."

Hali Curry MA '19, OTD '20 was completing her OTD residency with USC Chan's autism initiative, so she explored ideas to better serve adolescents and young adults on the autism spectrum. Curry built an infographic for families and individuals with autism to more easily access centralized information.

"I wanted to combine my previous research with what I've been working on to provide resources to this age group, because they really don't have a lot of resources and services," Curry says. "A lot of what I was reading about was related to providing advocacy skills, supporting self-determination and helping to maintain routines for adolescents and young adults. I wanted my product to be reflective of those needs."

Tabitha Lin MA '19, OTD '20, an OTD resident at City of Hope Hospital located in Duarte, Calif., focused on occupations relating to end-of-life care in acute hospital settings.

"It's typically so fast-paced that a patient can get transitioned to hospice really quickly, or their condition might be so acute that they're not appropriate to be seen [by an occupational therapist]," Lin says. "When the pandemic started, I was starting to hear more about the distress that people were going through with not being able to see their loved ones who are dying, whether or not it was related to COVID."

In response, Lin created a guide offering occupation-based recommendations for families and their loved ones to stay connected.

"I wanted to reinforce that, for people who are dying, they still have a sense of self and a sense of identity, and that they can still have valuable memories and interactions with the ones they love."

Consistent values in novel creations

For students and instructor alike, OT 699 proved to be a valuable learning experience, one that was intensified by the immediacy of the topics it covered.

"I think that a really valuable aspect of the course is that it made us think way outside of the box," Hicks says. "It gave us the opportunity to really understand how occupations are being affected by the pandemic and to find ways to creatively address and solve these issues."

"This class offered a lot of complex and thought-provoking discussions, and I'm grateful to Dr. Aldrich for guiding us through those conversations," Curry says. "It united us in a shared experience, and gave us that space to really push ourselves to apply our occupational lens."

"This class gave us a space to think of ways to empower our clients and to empower ourselves in order to address systemic health care disparities and inequities," Lin says. "It gave us the chance to think about the bigger picture and how we can contribute to the community in spite of the impact of the pandemic."

The value of OT 699 was accentuated as the pandemic continued to unfold throughout the summer and fall.

"I really want to acknowledge the excitement that surrounded what the students were able to create," Aldrich says. "The Chan leadership and I were so impressed and proud to see students learn new skills and use their passions to develop something that they could use in the future."

Aldrich's future includes another run of OT 699, which returned for the Spring 2021 semester. In the face of so much uncertainty, the coping, healing and sensemaking power of occupation might perhaps be the most important lesson of all.

"There's still going to be a lot of changes to daily life that are probably going to be different from what we've experienced up to this point," Aldrich says. "We want to be able to tailor the learning experience to what students are living in, because we don't know what the future holds."



Pain and Pleasure

Face to face and through the screen, a
USC occupational therapist helps a client better manage
her everyday pain to improve quality of life.

BY JAMIE WETHERBE MA '04



Five years ago, Kim Michalski, now 67, had a prominent career as an investment manager, overseeing portfolios for high-wealth clients and traveling across the country to manage her own staff.

But behind closed doors, Michalski was experiencing excruciating sciatic pain and spinal degeneration.

"Carrying suitcases and briefcases, even walking, was becoming a challenge," she says. "I could barely read my own handwriting. I would be at my desk, close the door and hang my head, and try to get through it."

In 2016, when Michalski was 63, the pain grew to the point that she had to go on disability.

"It was hard giving it up because I loved what I did, but I could no longer do it well," she says. "I wish I had known some of the techniques I use now back then."

Michalski is a patient of the USC Occupational Therapy Faculty Practice, which offers an occupational therapy intervention called Lifestyle Redesign, focused on helping people "redesign" daily habits to improve their health and wellness. The program starts with a detailed exploration of a series of factors, including how a patient eats, sleeps, exercises and manages stress, as well as the safety of their home and routines.

"Then we find the windows of opportunity to tweak things and improve your ability to manage your condition and quality of life," says Erin "Malia" Sako, Michalski's occupational therapist and assistant clinical professor at USC Chan.

A new lease on lifestyle

After seeing a number of medical specialists to get to the bottom of her pain, Michalski was diagnosed with rheumatoid arthritis; small fiber neuropathy; Mast Cell Activation Syndrome, which affects the body's histamine responses; and Postural Orthostatic Tachycardia Syndrome, a blood circulation disorder. She connected with a team of experts at Keck Medicine of USC, and in 2019, was referred to Sako.

"That started this wonderful journey on how to manage my life within the challenges I've been facing," Michalski says. "As my [conditions] have gotten more complicated, Malia's been able to provide me with tips and skills. She has been wonderful and tough; she doesn't let me backslide, and holds me accountable."

Lifestyle Redesign's innovative and highly individualized approach helps patients manage their conditions through collaboration and problem-solving, as well as setting realistic goals and expectations.

"If someone is coming in fresh with a diagnosis, like MS or Parkinson's, we can be a source of education and a space for learning and



self-analysis," Sako says. "We go through a lot of really tough mental and emotional work to figure out a patient's barriers to living a healthpromoting life."

Lifestyle Redesign is also appropriate for people further along in their health journey. An important piece of the program is ensuring that new habits and strategies are sustainable over time.

"I tell a lot of my patients, I'm not looking for them to have a really great month," Sako explains. "I'm looking for them to have the confidence and self-efficacy to integrate these strategies and education in a feasible and consistent way."

From making medications more accessible, to rearranging furniture and rugs, Sako helped Michalski adjust her home and habits to make life just a bit easier.

"I was resistant, initially," Michalski says. "I was thinking, 'I have to change all of that?' But it's helped immensely."

Even the way that Michalski wakes up in the morning was re-choreographed to minimize discomfort.

"I have a stool at the side of the bed, so my feet land on that instead of hitting the floor, which causes pain up my back," she explains.

So much of Lifestyle Redesign also focuses on making mental adjustments.

"I was still very independent," Michalski says. "Malia had to teach me how to ask for help with groceries, moving heavy things, cleaning — that was a big thing."

"[Malia] calls me a 'completer' — I can't leave things undone," Michalski continues. "But that pushes me too hard, and I exhaust myself and put myself into more pain."

Michalski learned to better manage her energy by taking breaks throughout the day, even splitting up recipes in order to cook favorite foods more efficiently.

"It helped me learn to pace myself and prioritize," says Michalski. "I've discovered it makes me more productive."

In addition to managing energy, Michalski learned other tricks and tools to manage her pain, including breathing exercises and practicing tai chi with the help of short YouTube videos.

"The small movements with the breathing have been the best tonic," she says.

Time to pause

After about four months, Michalski completed her first round of Lifestyle Redesign in early 2020. But then came the coronavirus. As lifestyle changes related to the pandemic started to impact her pain, Michalski came back to Sako for an "OT tune-up."

During their hour-long sessions, this time via telehealth conversations, Sako and Michalski worked on integrating a walker and other new adaptive devices into her routine, as well as improving eating and sleeping habits.

"I was having a lot of problems, and I needed help to get me back on track," Michalski says. "The good thing about the program is it's always there when you need it."

For many of Sako's patients, the unimaginable challenges posed by the pandemic have proven to be health-deterring. But for others like Michalski, that abrupt disruption caused by the pandemic has acted as an unexpectedly beneficial reset.

"I've heard a lot of people say, 'If I were out and working, I would never have time to do this.' Like with Kim, it's been a time to pause and prioritize their health — that's been a really good thing."

Still, it's been Michalski's commitment to her own wellness journey, online and in person, that has been essential to her progress.

"I think her engagement in the process has been key, especially in this transition into telehealth," Sako says. "Kim's just a delight to work with, and open to talking about any lifestyle topic. I think that openness has been a huge part of her success in our work together."

Learn more about Lifestyle Redesign programs at chan.usc.edu/otfp.



Research Buzz

TO DO UNTO OTHERS

Narrowing oral health disparities gaps of Black/African American children with and without disabilities.

BY DOMINIQUE COMO MA '16, PHD '21
OCCUPATIONAL SCIENCE PHD STUDENT AND AWARDEE, NIH F31
PREDOCTORAL INDIVIDUAL NATIONAL RESEARCH SERVICE AWARD

The question I have asked myself the majority of my life has been, "How will I effect change and improve the quality of life for others?" "Become a career scientist" was not the way I would have expected to answer. But through my experiences at USC Chan, I have come to consider that my professional aspirations as an occupational scientist can, in fact, allow me to improve the lives of others.

I originally came to USC to pursue my Master of Arts degree in occupational therapy. During the master's program, I was encouraged by faculty to apply to the Occupational Science PhD program, a hallmark of which includes immersion in a research group. I was fortunate to be placed in Professor Sharon Cermak's Sensory Adapted Dental Environments lab, which aims to make the dental experience better for children with autism spectrum disorders.

Oral health is a vital component of overall well-being because it impacts quality of life, both indirectly through our ability to confidently engage with others and express emotions through facial expressions ("smile!"), and directly through fundamental oral functions such as chewing and swallowing. But unfortunately, oral health is one of the most common unmet health needs in the U.S. Despite significantly increased access to care and higher rates of public insurance coverage, oral health care disparities persist for children from ethnic minorities, as well as for children with special health care needs such as those with ASD.

Many families with children who have ASD encounter significant barriers to oral care. Impaired communication, sensory processing sensitivities, uncooperative behaviors, restrictive eating habits and dental fear and anxiety all contribute to diminished oral care in this population. This is exacerbated by the fact that it's a challenge for parents to find dental practitioners who are both willing and qualified to treat their children with ASD. As a result, many children with ASD have delayed intervention and/or require the use of sedation or general anesthesia for routine dental procedures.

Similarly, Black/African American families encounter many barriers to quality oral healthcare across structural, societal and familial influences, which include limited access to specialty services, decreased awareness of public services and cost-prohibitive pricing structures and practices. Black/African American children and adolescents continue to have higher levels of dental caries (cavities or tooth decay), and significantly higher prevalence of untreated caries, which can lead to pain. The oral health disparities of Black/African American children — with and without disabilities — deserve a greater spotlight.



PHOTO BY PHIL CHANNING

My mixed methods dissertation project, which is grounded in occupational justice and utilizes a health disparity theoretical lens, will identify facilitators and barriers that inform oral health practices and examine the intersection of ASD, Black/African American culture and oral health to provide better insights into this population's unique needs. I am determined to identify factors that have the potential to improve oral health disparities for marginalized populations, and develop evidence-based interventions to minimize barriers that contribute to disparities for underserved populations. By receiving a NIH F31 Ruth L. Kirschstein National Research Service Award Individual Predoctoral Fellowship to Promote Diversity in Health-Related Research training grant award, funded by the National Institute of Dental and Craniofacial Research, I will gain the skills and expertise to do so.

In the short term, my goals are to develop a deeper understanding of health disparities, and to obtain advanced practice in research design and methodology, implementation science and knowledge mobilization and dissemination. In the long term, I see my research informing future research to mitigate health disparities, and hopefully develop a tested and tailored intervention for addressing barriers to oral health in this population. In addition, I hope to serve as a mentor and example to minority students who don't often see themselves reflected in the makeup of higher education faculty, so that they too can one day improve the quality of life for others.

GenNext

Meet the Trojans pushing occupational science and occupational therapy forward. Interview by Mike McNulty '06, MA '09, OTD '10.

GABRIEL CRAVENS '18, MA '21

Age: 25

Hometown: Corona, Calif. and Los Angeles

Undergraduate studies: Gender Studies with a minor in

Occupational Science at USC

Meaningful occupations: Listening to music; soaking up the sun; working out; discovering new bars and restaurants with friends **Describe OT in a few words:** Holistic, collaborative, health

promoting and creative.

Why did you choose to pursue a career in OT?

As an undergraduate, I realized that there was a need to improve the health and wellness of underserved populations, specifically in my own queer community. I saw that OTs were doing work to advocate for queer people in the health field, and I wanted to be a part of the work that needs to be done to improve the health and wellness of my community.

How has the COVID-19 pandemic changed your own habits or routines? Switching to an online platform was difficult. My role as a student was challenged, and thankfully I had faculty, mentors and peers to help with the transition. I had to re-learn a lot of my own habits and routines, like creating my own home gym, going on more walks and making my bedroom a space where I can also learn. It was tough at the beginning, but one thing about this profession is we adapt when faced with adversity!

You are president of OTs for OuTreach; what are the group's events and goals during this unprecedented academic year?

We switched some of our focus from community outreach to more of a student support resource. Campus life for some LGBTQ+ students is a safe place to express themselves away from home, and students had to go back to spending lots of time with families who were potentially unsupportive of their identities. We thought it was beneficial to host social events for current students — virtual closed spaces for LGBTQ+ students, and a virtual movie night for Trans Day of Visibility.

What do your own career plans include?

I have always been focused around advocating for my community within the occupational therapy field. I will be starting the OTD program in 2021. After, I hope to be doing part-time clinical work along with part-time teaching in order to become an OT educator. I also hope to publish papers and speak at conferences on the importance of non-discriminatory and de-stigmatized care for clients who are underrepresented and underserved!



FACE SHIELD

RELONGEST Year

Reflections on the frontline pandemic experience from a hospital-based occupational therapist.

BY CARNIE LEWIS '17, MA '18, OTD '19
ASSISTANT PROFESSOR OF CLINICAL OCCUPATIONAL THERAPY



SPRING 2020

I wake up, make my coffee, get changed, brush my teeth and head straight to work. I'm not a morning person — it's a wonder how I ended up in a job that starts at 7 a.m. every day.

Just as the caffeine kicks in, I enter the occupational therapy office on the third floor at Keck Hospital of USC. Much like any other morning, several people are crowded around the schedule board, assessing where they can fit in another patient within the timetable of OTs who are working today. Before I officially start my work day, I take a quick glance at the news (I am now awake enough to process basic words).

We've been hearing about the novel coronavirus in Wuhan, China, for a couple of months now, but it still sounds like a fictitious character. I laugh with my colleagues beside me in our cramped office, as we share jokes and tell a few stories. At some point, a colleague speculates that AOTA's annual conference will be canceled. I don't see that happening — it just seems so extreme at this point in time. After all, I had just flown back from Las Vegas for OTAC's spring conference, and that event was a hit, despite skittish concerns about random outbreaks in major cities around the U.S.

Over the next few days, my morning routine's the same, but the news is reporting an increasing number of positive cases around the nation. The hospital starts to feel eerie as we think about our own personal risks.

It's mid-morning by the time I get a text to stop treating patients ASAP and head straight for a meeting room. I'm not alone. There are 20 other physical, speech and occupational therapists in the room, and we're each given a surgical mask and told to sit six feet apart. Immediately, I know what's going on. Despite my positive outlook that has kept me blissfully ignorant of dire details in the news the past few weeks, I am immediately sobered. COVID-19 has arrived at the hospital, and we have already been exposed.

My way of life changes quickly. The stayat-home order gives me time to engage in the meaningful occupations that I've neglected since high school. I bake, draw and learn to make ice cream. I reorganize my room three separate times and participate in Zoom call after Zoom call with old friends.

At work, elective surgeries are canceled, as many patients as possible are discharged and medical-surgery units are upgraded to ICU-level units in preparation for the surge we are told is coming. The OT department is put on a staggered schedule so that we can decrease the need for physical presence in the hospital. We now sit six feet apart, wearing surgical masks all the time. Nobody is laughing in the morning. No one is huddled up to analyze the daily schedule board that is now half the size it was just a month ago. As we see the news from New York grow grimmer by the day, our only motto is to be as efficient as possible in order to minimize unnecessary time spent in the hospital environment.

A month goes by, and the fear surrounding the chaos grows. Every minute of every day contains new information from the hospital, the news and the scientific community. It feels like whatever sense I have just gained is quickly taken from me. Every night I get home to read COVID updates, and every morning I wake up to new announcements that contradict what I just read the night before. Strangely, I find that working directly with patients seems to be the one thing that doesn't dramatically change from day to day. But I'd be lying if I said I was comfortable being in the hospital, where it felt like no one was truly safe.

It's not until late April when I am pulled onto the COVID-19 clinical care team.





WORKING WITH A PATIENT SITTING AT EDGE OF BED

FACULTY OCCUPATIONAL THERAPIST JAMIE WILCOX, LEFT, WITH PHYSICAL THERAPIST VALERIE MUMPER

SUMMER 2020

I take a deep breath and go through the motions of donning my PPE, my personal protective equipment. Like a mantra, I repeat the steps over and over in my head to make sure I do it correctly:

Wash hands.

New hair net and clean shoe covers.

Yellow gown.

N95 mask.

Surgical mask over N95.

Face shield over both of those.

Sanitize hands.

Don gloves.

Finally, I ask a nurse to tape up the back of my contact gown. It's hard to breathe, but I'm not sure why. Is it because I'm sweating under this mass of paper and plastic? Or is it because, even though I'm covered head to toe in PPE, I still fear exposure to COVID-19? It's early summer, but it seems we still know very little about the virus that's getting transmitted at higher rates every day.

The suction of air gusts loudly as I open the vacuum-sealed door to the room of my first patient of the day. Jason is a 37-year-old with cystic fibrosis and HIV who recently tested positive for COVID-19. Jason is already receiving six liters of supplemental oxygen through an oxymizer, a thick plastic tube that wraps around his head and pushes concentrated oxygen into his nose in an attempt to make up for what his lungs are not able to absorb. Yet, even with this high level of oxygen, I'm told by his nurse that Jason continues experiencing rapid decreases in his blood-oxygen levels upon minor movements.

An awful feeling settles in my gut as I walk into the room. I introduce myself, my role and go through the basics of testing his vital signs — blood pressure, oxygen saturation within his blood and heart rate. At rest in bed, he's at 93 percent oxygen while on the oxymizer, which is above the critical 90 percent minimum, with heart rate only slightly elevated at 110 bpm.

He doesn't demonstrate any increased work of breath or distress, and is very motivated to get out of bed so that he can finally transfer to a commode. Even so, the moment he sits at the edge of the bed, his oxygen drops to 85 percent. He insists he doesn't feel short of breath despite the desaturation, but is clearly fatigued and working harder in his chest to breathe in and out. The moment he transfers to the commode at bedside, his oxygen levels drop even further, requiring constant vigilance on my part to monitor every symptom and vital sign. I work with him to facilitate slowed and deep breathing through his nose, and decrease the demands of the task in order to improve his oxygenation.

Underneath my gown, gloves, mask, face shield and hair net, I'm sweating. The moisture and heat coming off me starts building up and fogs my face shield. I breathe a sigh of relief when Jason has returned to bed and his oxygen recovers to its pre-activity level.

Every second of the day, Jason's oxygen saturation is monitored closely via a wireless pulse-oximeter on his finger that transmits the number to a computer at the nurse's station outside of his room. A mere nine hours after the morning's occupational therapy treatment, Jason is transferred to the ICU to receive even more concentrated oxygen and monitoring due to a rapid deterioration in his lungs. Nurses and physicians remain on standby to intubate him for possible mechanical ventilation.

After ending the session and repeating the tedious but vital process of taking off my contact gown and gloves and replacing them with new ones, I'm ready to visit my second patient of the day.

I meet John, a 75-year-old who had been transferred from an outside hospital after he tested COVID-19 positive. John has metastatic osteosarcoma, a bone cancer, in his spine, right thigh and lungs. He obtained a fracture from the

spine metastases, and any movement gives him significant pain. Despite his age and the fact that cancer is a serious comorbidity, he exhibits no "typical" COVID-19 symptoms. He breathes with adequate oxygen saturation on room air, his heart rate is stable and he doesn't experience any fatigue, loss of smell or other symptoms that we have come to associate with COVID-19. In fact, John will later be classified as an "asymptomatic" positive case. I evaluate and treat to address his pain, increase his strength and endurance, and teach him how to change basic daily activities in a way that will not risk further spinal fractures, just as I would for my other patients with spine-related oncological diagnoses.

My third patient of the day is Miguel, a 26-year-old with no known comorbidities. He is on the road to recovery, receiving a mere two liters of oxygen through a nasal cannula. Miguel has already left the ICU after being mechanically ventilated for weeks on end. Unfortunately, Miguel also suffered a stroke while in the ICU, which we now know can be a common result of COVID-19 because of its impact on blood coagulation.

Miguel is no longer the same person he was before contracting the virus. He demonstrates hemiplegia, severe paralysis to the right side of his body, and is currently non-verbal because the stroke impaired his memory, executive functioning, motor control and communication skills. Yes, Miguel is a survivor, and he will be recorded by Los Angeles County as "recovered." But he will still require weeks and months of multidisciplinary rehabilitation.

In my treatment session with Miguel, I focus on neuromuscular retraining of the right side of his body, so that he can sit up at the edge of the bed without falling over. I also work with him to begin using the muscles in his right leg and arm so that one day he can dress, eat, stand and walk without the need for maximum assistance. (cont. on p. 24)







USC FACULTY FEATURED IN AOTA'S COVID-19 WEBINAR

As the pandemic continues to unfold, occupational therapy best practices and protocols have also continued evolving.

In August 2020, Associate Clinical Professor John Margetis '11, MA '12, OTD '13 and Assistant Clinical Professor Jamie Wilcox MA '13, OTD '14 led "Occupational Therapy for COVID-19: Treatment and Recovery Trajectories," an online continuing education course hosted by the American Occupational Therapy Association. The webinar highlighted issues related to COVID-19 occupational therapy services, including client factors, treatment activities and goals, and patient trajectories across the care continuum to hospital discharge and beyond.

Wilcox and Margetis are part of the designated COVID-19 inpatient care teams at Keck Hospital of USC. USC Chan faculty members **Lucy Hosoda** MA '16, OTD '17, **Carnie Lewis** '17, MA '18, OTD '19 and **Kelsey Peterson** MA '17, OTD '18 also treat COVID patients at the hospital.

Wilcox provided an overview of oxygen therapy, the implications of saturation levels for a person's occupational performance and basic principles of clinical monitoring of vital signs during treatment sessions.

"When you can't breathe, you really can't talk, you can't eat, you can't relax, you can't sleep, you can't focus, you can't move and you can't function," Wilcox said. "Just like activity prescription and lifestyle, balance is important. Oxygen therapy is about finding a perfect balance between delivering the lowest amount of oxygen supplement ... to achieve the most normal saturation possible for the patient."

Later in the webinar, Margetis used a case study to highlight the week-by-week role that occupational therapy plays in the acute care trajectories of COVID patients.

"The ICU treatment progression is linear in a sense, but [occupational therapists are] always doing a variety of things all at once," Margetis said. "We're helping with the wakefulness and the 'sedation vacations;' we're managing that agitation that people can experience when waking up from sedation; we're progressing to cardiac chair activities, edge of bed, standing if we can; and at every single step, we're looking at that postural control and breath control."

The presentation concluded with a few personal and professional reflections about the "new normal" that the pandemic has brought upon hospital-based occupational therapists.

"I've been working in advanced lung diseases and lung transplant for a long time, and I've always known this but I think I'm finally realizing that the rest of OT world is realizing it now; that occupational engagement is so critical for patients [who] are slowly having a harder time catching their breath," Wilcox said. "The opportunity for distraction, the opportunity to feel like yourself again beyond just doing static exercises, being able to play when you're so scared in an ICU room and isolated from the rest of the world and your loved ones, is a very unique experience even if it's just for 10 minutes."

—Mike McNulty '06, MA '09, OTD '10



FALL 2020

The N95 mask imprints lines on my face that last for hours after I take it off, thanks to the dehydration I've sustained over the day because I am unable to drink water between treatment sessions. Even though I'm home, showered and done for the day, those lines are a reminder that I am not free of this virus and its impacts on my own body and mind. I can't help but wonder where the rhyme or reason to this virus is. How does one person remain asymptomatic, while another demonstrates significant disease and impairment?

Data show us that patients with more comorbidities and older age are at a higher risk for fatality and/or serious complications as a result of COVID-19. But it's hard to feel confident that we can predict anybody's disease course. It's hard to feel that I have any sense of understanding or control when each patient presents so differently, and thus require such different approaches to occupational therapy treatment. It's still so hard to feel safe myself, though I trust the PPE I wear.

The fear that COVID-19 has imposed on society permeates every interaction and movement of my day. Was the 30 seconds that I spent washing my hands between patient rooms enough to clear the virus? Will the cough of a patient spread particles under and around my face shield, onto my face and infect me? Is there a chance that I unknowingly carry the virus and infect someone else?

We've been focusing so much on COVID-19's mortality rate that we often forget that recovered infections can still have lasting symptoms and impairments. I'm relatively young and healthy. Statistically, I am less likely to experience significant disability or mortality. But all I have to do is think back to Miguel's stroke and be reminded of how severe this virus can be for the young and healthy too.

The hospital still feels so much different than it did in early March. But with time, the novelty of masks disappears. I'm used to sitting six feet apart while reviewing charts. The ebb and flow of cases becomes mundane. At least, that's what I think, until the third and largest surge hits Los Angeles County after Thanksgiving. I force myself not to check our electronic chart system to calculate the remaining numbers of open beds at Keck Hospital. Unfortunately, it's all for naught when I receive an email from our CEO with the subject line "HIGH CENSUS ALERT." We have very few ICU beds left, yet we are one of the handful of facilities in the county that still have any beds available at all. Day by day, the number of employees who test positive grows. Nursing units become understaffed, and our morgue fills up. This surge is by far the scariest one yet, because our hospital system is becoming so overloaded.









WINTER 2020-21

Hope is an emotion I have avoided for the last several months. But today, I am hopeful.

As I feel the sharp prick in my left arm, tears begin welling up in my eyes. I feel a twinge of guilt at giving the impression that I'm in serious pain to the nervous pharmacy student who's administering my injection. I can't believe I'm crying, but it also feels like the most natural reaction to have. What's the normal response to getting the first dose of the vaccine? After having worked for so long on the COVID-19 units and being so stressed about my own safety and the health of those around me, the vaccine feels like a breath of fresh air. It feels like seeing a light at the end of this tunnel, even if it's still very dim and distant.

From a clinical standpoint, I am confident that occupational therapy care has been critical for the survival and rehabilitation of individuals recovering from COVID-19. For example, I recently had one patient, Susan, whose cardiopulmonary endurance was so low and oxygen needs so high that she could barely sit upright for more than a few minutes without experiencing dangerous drops in blood-oxygen levels. After working with her for a few weeks, we were able to decrease her oxygen requirements and improve her activity tolerance so that she could engage in more than 30 minutes of seated activities. Ultimately, this allowed her to independently complete all of her basic daily activities such as bathing, eating and grooming (an independence that we too often take for granted). With her increased independence, Susan was able to go home with family support, and thus open up a scarce hospital bed for a new patient in need.

Meeting patients at their most vulnerable and frightened moments helps me forget about my own fears — and the horror of the hundreds of thousands who have died from this disease and to remember that I still have control in this one aspect of helping someone heal. I can utilize my unique lens as an occupational therapist to target whatever aspect of their being, whether socio-emotional, physical, cognitive or valuesbased, that needs assistance and healing. I was able to work with Jason, John, Miguel and Susan in varying ways that, at the end of the day, contributed to each of their own recoveries. It's worth the long days and weeks, the exhaustion and the dehydration under the N95s, when I see a patient successfully discharged.

Nevertheless, despite the hope from the vaccine, I know this pandemic is far from over. I will treat many more Jasons, Johns, Miguels and Susans, just as I will treat more patients who do not survive. At this point, I've lost so many of my patients from COVID-19 that I've stopped counting. Some I had already known from previous hospital admissions, when I had treated them after a liver transplant or a bladder cancer resection. To my mind, they had already survived their health crisis of liver failure or cancer. To watch them succumb to this virus a few months later back at Keck Hospital fills me with grief and rage. It's one of the reasons I get so incredibly upset when I see people unmasked, or being blasé about stay-at-home orders. Lives are at stake, and we have the responsibility to do everything possible to protect them.

Being a frontline occupational therapist during COVID-19 has been one of the hardest things I've ever had to do. Although I'm still a younger therapist, I imagine that working on the COVID units will forever be the greatest challenge experienced in my career. Despite the difficulties, there are so many things to be thankful for: adequate PPE, colleagues who support me and FaceTimes with my family who live more than 9,000 miles away in Australia.

I look forward to the day when this pandemic is over, or at least, to the day when it's controlled enough to not have to live in this state of constant unknown. I am hopeful that the vaccine will provide a measure of control, even though its population-wide effects are still months away.

Until then, I will continue doing my part to help individuals in our community heal. As I do my part, I beg of everyone else to do theirs. I don't have the luxury of staying at home, but if you are able to, please continue doing so. Stav safe, abide by social distancing, wear a mask and listen to public health officials. Let's flatten this curve, reduce the surge and work to ensure we keep as many people as we can safe and healthy.

In Print

precarious \prih-KAIR-ee-us\
(adjective) 1a: dependent on
chance circumstances, unknown
conditions, or uncertain
developments 1b: characterized
by a lack of security or stability
that threatens with danger
2: dependent on uncertain
premises 3:(archaic) depending on
the will or pleasure of another



In the wake of the 2008 financial crisis, the Great Recession created long-lasting economic effects that made everyday life more precarious for many people throughout the nation and world. According to economic metrics, the recession technically lasted 18 months. Yet, in many ways, for many populations, life has never been the same since.

Long-term unemployment, defined as not having paid work in the formal labor force for a year or longer, remained at elevated levels throughout the subsequent decade in many nations, including the U.S. But not long after America's economy reached record high workforce participation and record low poverty levels in 2019, the coronavirus pandemic hit. For the second time in 12 years, everyday life for tens of millions of Americans has again become pointedly precarious.

To shed light on this "precarity" — the precarious nature of everyday life — especially as it relates to long-term unemployment, Associate Clinical Professor **Rebecca Aldrich** '05, MA '06 co-authored "Picturing Precarity through Occupational Mapping: Making the (Im)Mobilities of Long-Term Unemployment Visible" published in the *Journal of Occupational Science*. The article was written with occupational scientists and sociologists at several Canadian universities, and draws upon data gathered during a larger ethnographic study conducted in the U.S. and Canada from 2014-18.

Aldrich is an occupational scientist who studies sociopolitical influences on everyday life, including the "wicked problem" of long-term unemployment. In the article, Aldrich and colleagues used a process called "occupational mapping" to explore how study participants who identify as long-term-unemployed negotiated their daily routines and occupations within the context of their local spaces and places.

Occupational mapping is a data visualization method that prompts participants to draw a map on a large sheet of blank paper. This map-making process elicits data as participants explain their map, creates a visual product for further data analysis and leads to discussions about occupations and places that might otherwise be geographically "invisible."

Participants' maps highlighted several places geared toward unemployed people, such as offices related to job-seeking activities, as well as places related to resource-seeking, such as social service organizations. As participants' lives seemed to become increasingly precarious, the maps showed visual evidence that they were living quite literally on the margins of society, with fewer and fewer chances to interact with people who were adequately employed. Participants' maps showed the ways that varying degrees of precarity impacted their mobility, as they strategically engaged in occupations throughout their neighborhoods and cities to cope with the absence of paid employment.

Unemployment quite literally pushes people out of certain spaces, and pulls them toward certain other ones. By using maps to demonstrate the various ways that people experience unemployment by moving through geographical spaces, Aldrich and colleagues show that precarious conditions can be made tangibly visible, and challenge the notion that precarious everyday life represents an acceptable "new normal."

"Picturing Precarity through Occupational Mapping: Making the (Im) Mobilities of Long-Term Unemployment Visible" is available in the Journal of Occupational Science at tinyurl.com/picturing-precarity.

-Mike McNulty '06, MA '09, OTD '10

Rebecca Aldrich was the lead author of "Occupational Therapists as Street-Level Bureaucrats: Leveraging the Political Nature of Everyday Practice," published in the *Canadian Journal of Occupational Therapy*. Aldrich co-authored "Challenging Conceptualisations of Work: Revisiting Contemporary Experiences of Return to Work and Unemployment," published in the *Journal of Occupational Science*. Aldrich also co-authored "Centering the Complexity of Long-Term Unemployment: Lessons Learned from a Critical Occupational Science Inquiry," published in *Societies*.

Amber Angell PhD '16 was the lead author of "Starting to Live a Life: Understanding Full Participation for People with Disabilities after Institutionalization," published in the *American Journal of Occupational*

Therapy. Angell was also the lead author of "Prevalence of Physical and Mental Health Conditions in Medicare-Enrolled, Autistic Older Adults," published in *Autism*. Angell also co-authored "Characterizing Enrollment in Observational Studies of Duchenne Muscular Dystrophy by Race and Ethnicity," published in the *Journal of Neuromuscular Diseases*.

Grace Baranek, Gelya Frank and **Rebecca Aldrich** co-authored "Meliorism and Knowledge Mobilization: Strategies for Occupational Science Research and Practice," published in the *Journal of Occupational Science*.

Occupational science alumna Kristine Carandang PhD '18, Cheryl Vigen and Beth Pyatak '02, MA '04, PhD '10, MS '15 co-authored

"Re-Conceptualizing Functional Status through Experiences of Young Adults with Inflammatory Arthritis," published in *Rheumatology International*.

Sharon Cermak co-authored "Reliability and Validity of the Chinese Version of the Infant/Toddler Sensory Profile," published in the *American Journal of Occupational Therapy*.

Camille Dieterle MA '07, OTD '08 authored "The Case for Environmentally-Informed Occupational Therapy: Clinical and Educational Applications to Promote Personal Wellness, Public Health and Environmental Sustainability," published in the World Federation of Occupational Therapists Bulletin.

Occupational science student Raymond Hernandez PhD '22 and Beth Pyatak co-authored "Lifestyle Balance, Restful and Strenuous Occupations, and Physiological Activation," published in the Journal of Occupational Science.

Karrie Kingsley MA '01, OTD '07 co-authored "Occupational Therapy Practice Guidelines for Early Childhood: Birth-5 Years," and was the lead author of "Interventions Supporting Mental Health and Positive Behavior in Children Ages Birth-5 Yr: A Systematic Review," published in the *American Journal of Occupational Therapy*.

Christopher Laine was the lead author of "Parkinson's Disease Exhibits Amplified Intermuscular Coherence during Dynamic Voluntary Action," published in *Frontiers in Neurology*.

Christopher Laine, Sook-Lei Liew MA '08, PhD '12 and Occupational Science students Miranda Rennie PhD '24 and Kaori Ito MA '16, PhD '21 co-authored "A Virtual Reality Muscle–Computer Interface for Neurorehabilitation in Chronic Stroke: A Pilot Study," published in Sensors.

Mary Lawlor co-authored "Understanding Connectivity: The Parallax and Disruptive-Productive Effects of Mixed Methods Social Network Analysis in Occupational Science," published in the *Journal of Occupational Science*.

Sook-Lei Liew co-authored "Can We Predict Real-Time fMRI Neurofeedback Learning Success from Pretraining Brain Activity?" and "Testing a Convolutional Neural Network-Based Hippocampal Segmentation Method in a Stroke Population," published in *Human Brain Mapping*. Liew also co-authored "Transfer of Motor Skill between Virtual Reality Viewed Using a Head-Mounted Display and Conventional Screen Environments," published in the *Journal of NeuroEngineering and Rehabilitation*.

Sook-Lei Liew, Jess Holguin '96, MA '05, OTD '11, John Margetis '11, MA '12, OTD '13 and Pamela Roberts co-authored "The ENIGMA Stroke Recovery Working Group: Big Data Neuroimaging to Study Brain–Behavior Relationships after Stroke," published in *Human Brain Mapping*.

Sook-Lei Liew and postdoctoral fellow **Stéphanie Lefebvre** Postdoc '21 co-authored "Embodiment is Related to Better Performance on a Brain–Computer Interface in Immersive Virtual Reality: A Pilot Study," published in *Sensors*.

Bobbi Pineda was the lead author of "Interrater Reliability and Concurrent Validity of the Neonatal Eating Outcome Assessment," published in the

American Journal of Occupational Therapy. Pineda was the lead author of "Maternal Milk and Relationships to Early Neurobehavioral Outcome in Preterm Infants," published in the Journal of Perinatal & Neonatal Nursing. Pineda was the lead author of "The Baby Bridge Program: A Sustainable Program that Can Improve Therapy Service Delivery for Preterm Infants Following NICU Discharge," published in PLoS ONE. Pineda was the lead author of "Preterm Infant Feeding Performance at Term Equivalent Age Differs from that of Full-Term Infants," published in the Journal of Perinatology. Pineda also co-authored "Auditory Exposure of High-Risk Infants Discharged from the NICU and the Impact of Social Factors," published in Acta Paediatrica.

Bobbi Pineda and staff member Polly Kellner co-authored "Neonatal Feeding Performance is Related to Feeding Outcomes in Childhood," published in *Early Human Development*. Pineda and Kellner also co-authored "Factors Related to Enrollment in Early Therapy Services Following Neonatal Intensive Care Unit Discharge," published in *Acta Paediatrica*. Pineda and occupational science student Marinthea Richter OTD '20, PhD '25 co-authored "Neurobehavior of Very Preterm Infants at Term Equivalent Age is Related to Early Childhood Outcomes," published in *Acta Paediatrica*.

Deborah Pitts PhD '12 co-authored "Examining Fall Risk among Formerly Homeless Older Adults Living in Permanent Supportive Housing," published in *Health and Social Care in the Community*.

Shawn Roll co-authored "Intelligent Agents to Improve Thermal Satisfaction by Controlling Personal Comfort Systems under Different Levels of Automation," published in *IEEE Internet of Things Journal*. Roll also co-authored "Impacts of Working from Home during COVID-19 Pandemic on Physical and Mental Well-Being of Office Workstation Users," in the *Journal of Occupational and Environmental Medicine*. Roll also co-authored "Comparative Efficacy of the Dorsal Application of Kinesiotape and Splinting for Carpal Tunnel Syndrome: A Randomized Controlled Trial," published in the *Journal of Hand Therapy*. Roll also co-authored "Characterization of Tasks and Time Efficiency of Dental Hygiene Students during Clinical Training," published in the *Journal of Dental Hygiene*.

Shawn Roll, Sook-Lei Liew and students David Saldana MA '19, Meghan Neureither MA '18, OTD '19, Allie Schmiesing MA '18, OTD '19 and Esther Jahng MA '20, OTD '21 co-authored "Applications of Head-Mounted Displays for Virtual Reality in Adult Physical Rehabilitation: A Scoping Review," published in the *American Journal of Occupational Therapy*.

John Sideris, Sharon Cermak and Lisa Aziz-Zadeh; with Occupational Science students Christiana Butera PhD '21 and Aditya Jayashankar PhD '23; and postdoctoral fellows Emily Kilroy PhD '18, Postdoc '21 and Laura Harrison Postdoc '20 co-authored "Impact of Sensory Processing on School Performance Outcomes in High Functioning Individuals with Autism Spectrum Disorder," published in Mind, Brain, and Education.

Occupational science student **Buwen Yao** PhD '23 and **Shawn Roll** co-authored "Comparing Shape Categorization to Circularity Measurement in the Evaluation of Median Nerve Compression using Sonography," published in the *Journal of Diagnostic Medical Sonography*.

A DEEPER MEANING

USC Chan Board of Councilors member Susan Knox reflects on the power of occupational therapy from her perspective as a patient on the other side of the bed.

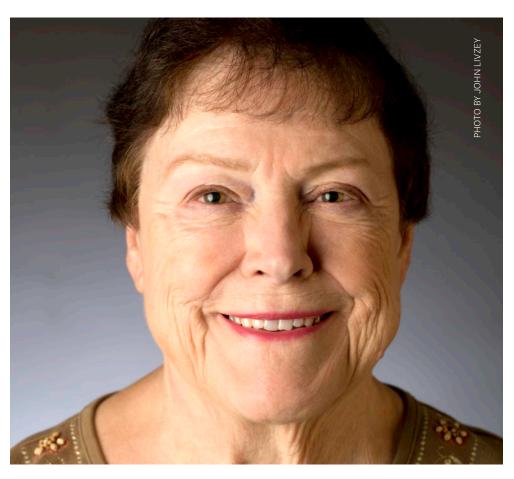
BY SUSAN KNOX MA '68, PHD '97 USC CHAN BOARD OF COUNCILORS MEMBER

In the fall of 2014, I had just recovered from a total knee replacement. In October, I was preparing programs for the annual luncheon of the California Foundation for Occupational Therapy to take place during the Occupational Therapy Association of California's conference in Pasadena. I started having difficulty swallowing solid foods, but I wasn't too concerned since I could still swallow liquids. But soon, I was having difficulty swallowing liquids too. I went to urgent care, they felt it was an allergy and gave me a steroid shot and Benadryl and sent me home.

The following day, nothing had changed, so I went to the emergency room. Again, they didn't think it was serious and sent me home, saying that if things change, to come back. The next day I awoke and could hardly get out of bed, as my whole trunk was weak. Back to the ER, and this time they admitted me for tests.

That first evening in the hospital, my husband Bob and I were folding and assembling programs for the luncheon, as the conference was starting in two days. I gave Bob instructions for all the jobs that I normally would do, and two big boxes to be delivered to my colleagues for the luncheon and for the exhibit hall.

The next days were filled with every imaginable test for neurological problems. I also had a fluoroscopy for swallowing, which was done by the speech therapist, and she and I studied it intensively since I had treated children with swallowing problems and was curious. I also had a spinal tap. Those first few



days were particularly frightening, since I had treated many children with neurological and orthopedic problems and I feared the worst. I would have to wait for several days to find out the results. The results of the spinal fluid showed increased protein, which was indicative of Guillain-Barre syndrome.

Guillain-Barre is believed to be an autoimmune disease that causes weakness, usually starting distally in the lower extremities, and ascending to all the core muscles. But in my case, it started with my core and went distally. I was treated aggressively with steroids and immunoglobulin for five days, and then with intensive OT, PT and speech. With this treatment, most patients recover fully. I had treated many children with Guillain-Barre when I worked at Children's Hospital of Los Angeles and I knew the prognosis. Knowing that I would recover elated me, and I was back to my cheery self.

Meanwhile, the OTAC conference went on without me. It was the first one I missed in about 40 years. In my bed, I could watch the large clock on the wall and imagine what was going on that very minute with our CFOT programs. I got calls from my friends assuring me things went well.

After the days of intensive medical treatment, I went to the acute rehab unit of

the hospital. I still had IVs and a feeding tube, since the speech therapist was concerned with potential aspiration. Therapy consisted of two hours each of OT, PT and speech daily. I was the ideal patient for rehab as I knew the value of therapy, and I knew I would get better. Because I am an OT, my interactions with the doctors, nurses and therapists were special, and I wanted to know everything about my care. One of the OTs had a student working with her, and we had many discussions about exercises, adapted equipment and my occupational goals. I thought, 'What a lucky student, getting two OTs!'

When I was critically ill, I felt like I was a different person who couldn't do much, and everything I could do felt very different. But during my rehab, I became very proud that I was an OT because every day I could do something new, and it was the therapists (especially the OTs, because we were working on function) who guided my recovery. It was as if each day they gave me back a piece of myself. I shared my feelings with the therapists, and they welcomed this compliment. While I don't recommend this type of lesson, the insight and pride I experienced happened because I was an occupational therapist on the other side of the bed.

In complicated times, two simple words to all who are on the frontlines:

Thank you.



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