

SPARK

**A.T. Still University's
community health innovators**

Elvira Duarte, OTD, '23, presents her capstone project, "Occupational Therapy's Impact on the Professional Development of Staff Working in a Community-Based Non-Profit."



A.T. Still University
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Background

- The occupational therapy (OT) profession concerns itself with occupational justice which includes accessing quality health outcomes across the lifespan (Browman & Suarez-Balcazar, 2009)
- Ethnic minorities in the U.S. have poor health outcomes due to systemic barriers based on the social determinants of health (Healthy People 2030, n.d.; Keeler-Starkey & Bunch, 2020; Olive, 2020)
- Community-based interventions are an efficacious way to reach families with language barriers and limited health literacy (Burke et al., 2016; Dubay et al., 2017; Magana et al., 2017; Pires et al., 2020)
- Latino children are significantly misdiagnosed or underdiagnosed with developmental delays (Centers for Disease Control and Prevention, n.d.; UC Davis Health, 2012)

Guiding Theory

Socio-Ecological Model
The educational program impacts families & societal barriers and investing in staff who established the most trust and rapport with need.

- Societal**
 - Federal Act
 - Immigration
- Community**
 - FRC Staff
 - Schools, Health providers
- Relationships**
 - Partners
 - Lack of resources
- Individual**
 - Mothers (Fr)
 - Education
 - Culture & Beliefs

Program Purpose & Objectives

Purpose
To develop a site-specific educational program for Lutheran Social Services of the Southwest (LSS-SW) staff working for their family resources centers (FRCs).

Objectives

- Establish rapport with families and staff while conducting a needs assessment at Mesa FRCs.
- Develop a 5-part educational program for staff based on early childhood and caregiver topics from an OT perspective.
- Deliver 5-part ed. program to enhance staff's knowledge on child development, neurodiversity, and mental health.
- Evaluate educational program's impact on the development of staff regarding topics.
- Contribute to LSS-SW referral resources for families seeking various services.

Methods

Participants

- Convenience sample of approximately 10-14 and field staff of LSS-SW family and children department.

Needs Assessment

- Observing weekly parent-child workshops
- Semi-Structured Interviews of 4 staff at Mesa

5-Part Educational Program Topics
30-minute online sessions, 1x/week

- The Building Blocks of Child Development: Family Occupational Therapy Perspective
- Neurodiversity Part I & II
- Maternal Mental Health
- Infant & Early Childhood Mental Health

Program Evaluation

- Focus Group Interview
- Thematic Coding

SPARK

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2024

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ON THE COVER

An artistic rendering of the human nervous system on display at the Museum of Osteopathic Medicine



ATSU Mission
A.T. Still University of Health Sciences serves as a learning-centered university dedicated to preparing highly competent professionals through innovative academic programs. The University is committed to continuing its osteopathic heritage and focus on whole person healthcare, scholarship, community health, interprofessional education, diversity, and underserved populations.

ATSU schools and colleges
ATSU is comprised of Kirksville College of Osteopathic Medicine (ATSU-KCOM), Arizona School of Health Sciences (ATSU-ASHS), College of Graduate Health Studies (ATSU-CGHS), Arizona School of Dentistry & Oral Health (ATSU-ASDOH), School of Osteopathic Medicine in Arizona (ATSU-SOMA), Missouri School of Dentistry & Oral Health (ATSU-MOSDOH), and College for Healthy Communities (ATSU-CHC).

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A future focused on innovation

ATSU is laser-focused on community health innovators and innovations, as evidenced in the University's Strategic Plan 2021-2028, Theme II, mission-focused scholarship, which states, "Working in partnership with community health centers, significant and important opportunities exist for scholarly work relating to health professions education and challenges facing healthcare in underserved communities. These community health scholarly activity opportunities will advance the University's mission and its vision for pioneering contributions to healthcare education, knowledge, and practice."

In addition to a generous alumni network, ATSU maintains important clinical education affiliations with the National Association of Community Health Centers (NACHC) and partnering community health centers (CHCs) embedded in underserved communities across the country.

ATSU students routinely spend significant amounts of their clinical education years in CHC affiliates to reach and help those who are most vulnerable. Because of this affiliation, ATSU is a leader in educating the next generation of CHC providers specifically for underserved populations, which in turn is driving and expanding community health scholarly activity throughout the University.

As featured in this edition of *Spark*, examples of community health innovators include ATSU faculty members Joy H. Lewis, DO, PhD, FACC; Ann Eshenaur Spolarich, PhD, RDH, FSCDH; and Scott Howell, DMD, MPH, '14. Additionally, Valena Fiscus, DO, MPH, '13, and Romana Muller, EdD, MSDH, RDH, '22, were awarded ATSU Underserved Community Scholarly Improvement Grants through a one-time special offering and are highlighted herein on Page 6.

Further, ATSU had numerous community health innovators and innovations present at conferences, including NACHC Community Health Institute & Expo in San Diego and the ATSU co-sponsored Beyond Flexner Alliance Conference in Phoenix. Highlights from these conferences are featured beginning on Page 20.

All aspects of scientific discovery and advancement are valued at ATSU, and community health innovators and innovations are critical to achieving mission-focused research and meaningful contributions to improved healthcare education, knowledge, practice, and systems.

Yours in service,



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Spark magazine highlights scholarly activity across the University. It is published biennially by Communication & Marketing and Research, Grants & Scholarly Innovations, A.T. Still University.

Advance osteopathic student research

Neil Sargentini, PhD, Student Research Growth Fund



At ATSU, student research opportunities incorporate state-of-the-art technology, hands-on lab experiences, and world-renowned education from leading researchers, educators, and mentors.

Student engagement in research facilitates critical thinking and appraisal skills, enhances the understanding of clinical medicine, provides opportunities to present findings at regional and national conferences and within academic journal publication, and amplifies desirable skills when applying for increasingly competitive postgraduate education and residency.

The Neil Sargentini, PhD, Student Research Growth Fund at A.T. Still University-Kirksville College of Osteopathic Medicine (ATSU-KCOM) has been established by Dr. Sargentini's family in honor of his 26 years of service to ATSU and in memory of his passion for teaching, research, and mentoring his students.

This fund supports the increasing number of ATSU-KCOM student research projects and related research supply costs, student research scholarly publication costs, and student travel costs to present research and scholarly outcomes at regional and national conferences.

To make a gift, please visit giving.atstu.edu/sargentini or contact Brad Chambers, director of development, at development@atsu.edu or 660.216.2180.



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ATSU's mission statement is deeply rooted in every aspect of the University. From its daily operations to its scholarly efforts, ATSU prepares highly competent professionals through innovative academic programs, along with a commitment to continue its osteopathic heritage and focus on important topics including community health and underserved populations.

When ATSU developed its latest strategic plan in 2021, one of its emerging themes was mission-focused scholarship. The goal of this theme is to expand the University's scholarly focus on community health and health systems. ATSU places emphasis on its partnership with the National Association of Community Health Centers (NACHC) and affiliated community health centers (CHCs), taking opportunities to produce scholarly work centered on improving health professions education and addressing healthcare challenges in underserved communities. Ultimately, these opportunities advance ATSU's mission and vision by contributing to healthcare education, knowledge, and practice.

To support ATSU's strategic plan, including its theme of mission-focused scholarship, ATSU Research, Grants & Scholarly Innovations (RGSi) developed its own strategic plan. This plan features four goals of strengthening research infrastructure and culture; enhancing the growth, relevance, and impact of A.T. Still Research Institute (ATSRI); enhancing the impact, capacity, competitive advantages, and value added by RGSi service departments; and promoting synergistic engagement among internal and external partners and collaborators. Through these goals and the resources available across the University, ATSU has facilitated the pursuit of scholarly activities to improve health professions education and tackle issues facing healthcare.

Leading these scholarly activities are dedicated professionals who have devoted their careers to improving health outcomes and serving the underserved. These ATSU faculty and staff members are healthcare professionals who exude compassion by finding solutions for improving access to care and reducing health disparities.

The impact these innovators make stretches far beyond their immediate communities to students, colleagues across ATSU and at other institutions, and entities at local, state, and national levels. Following are some of the many faces behind ATSU's community health efforts.

Community health innovators

ATSU faculty members improve health outcomes for underserved populations

By Katie Hubbard

Joy H. Lewis, DO, PhD, FACP

Community health has been a cornerstone of Dr. Lewis' professional life. Since earning a certificate in community health alongside her bachelor's degree in quantitative economics, Dr. Lewis' career has taken a unique but purposeful path.

Today, as a professor and chair of public health at A.T. Still University-School of Osteopathic Medicine in Arizona (ATSU-SOMA), Dr. Lewis is also founding director of the National Center for Community Health Research (NCCHR), a unique alliance between ATSU and the National Association of Community Health Centers (NACHC), which is housed as one of ATSRI's three research centers. Under NCCHR, Dr. Lewis leads and supports quality research using a distributed model addressing social determinants of health for vulnerable populations. She also mentors students, residents, fellows, and faculty on community-based applied research projects.

Her passion for helping vulnerable populations began as an undergraduate student, using math to solve economic problems while learning about health disparities and issues with the U.S. healthcare system. During this time, she worked at the Massachusetts Department of Medical Security where she focused on high-risk insurance pools, figuring out how to get insurance for people who couldn't afford it.

After college, and wanting to be prepared for anything, she went into investment banking. She quickly realized she was drawn to working on healthcare deals. After a year of continuing to see problems with health disparities and access to care, Dr. Lewis decided to become part of the solution.

She entered medical school at the Chicago College of Osteopathic Medicine with the goal of becoming a doctor of osteopathic medicine (DO), as she felt the osteopathic philosophy better addressed the issues she had been learning about. While earning her degree, she spent as much time as possible in Washington, D.C., working in healthcare policy. She focused her efforts on minority and women's health and prison healthcare.

"I met people who committed federal crimes on purpose after being released from prison to get back into prison to get their hepatitis or tuberculosis treated because they didn't have health insurance," Dr. Lewis says. "One man with TB urinated on the federal courthouse steps so he could get back into federal prison because he didn't want to give TB to his family."

These experiences propelled Dr. Lewis to continue working toward solutions for vulnerable populations while also paving the way for future DOs. She was the first of many DOs to complete an internal medicine residency at the University of Chicago, followed by becoming the first DO to be a Robert Wood Johnson Clinical Scholar. During this time, she worked at RAND Health Care where she studied healthcare for the homeless and was principal investigator for a grant evaluating California SB 393, a law for pharmacies to

provide discounted pharmaceuticals to seniors. As a result of this work, which would become her dissertation, the California legislature changed the law to ensure pharmacies were advertising these discounts to seniors.

Dr. Lewis' career was headed down an academic path, although she was still doing some clinical work. She wanted to ensure she could still practice medicine full time, so her family moved to Jackson, Wyoming, where she opened a private practice and spent a decade caring for patients.

"I think it's important for any doctor who wants to influence health policy and study health outcomes to actually be a doctor for a while," Dr. Lewis says. "We can make recommendations about what you should do in clinical practice, but if you've never actually done it, you don't know what it's like."

All of this experience culminated in Dr. Lewis joining the faculty at ATSU-SOMA in 2011. Through her roles with the School, she has been in a position to make a difference for vulnerable people, those in an exam room and those who can't make it to an exam room. She dedicates much of her time and effort to projects allowing her to have an exponential effect on community health.

One such ATSU-SOMA project is "Leading and Teaching in the Nation's Health Centers: The Primary Care Transformation Executive Fellowship*," funded by the Health Resources and Services Administration for nearly \$2 million. Having just completed its fifth and final year, the innovative project strengthened the community-based primary care workforce by using a train-the-trainer approach. The fellowship program taught community health center physicians and physician assistants about community-oriented primary care and health systems science while developing a pipeline of providers and students motivated to improve care for vulnerable populations.

Dr. Lewis also mentors student research aimed at improving community-oriented primary care. Through ATSU-SOMA's unique partnership with NACHC, these projects take place in underserved communities across the country. Rather than studying patients, these projects focus on working with patients and communities to find solutions and address social determinants of health.

"I encourage students to set up projects using methods that ensure we will gain useful information regardless of the findings," Dr. Lewis says. "Our work often isn't generalizable, and that's purposeful. If you only do work that is generalizable, you're not working on problems that affect unique vulnerable populations."

Her work has influenced research at schools and programs beyond ATSU-SOMA. She is excited about the partnerships she has formed with other educational programs, including her interdisciplinary collaboration with Kelsey Picha, PhD, ATC, assistant professor of interdisciplinary health sciences at

A.T. Still University-Arizona School of Health Sciences. Together, they are helping the athletic training field recognize social determinants of health.

As an early promoter of social determinants of health, Dr. Lewis is also excited about the growing national awareness surrounding the topic and how the next generation of healthcare professionals will be better prepared to improve health for the underserved.

"I chose to work where I work and do what I do because our projects make a difference in the real world," Dr. Lewis says. "We are always keeping our eye on how to improve health outcomes for vulnerable people and populations."

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Ann Eshenaur Spolarich, PhD, RDH, FSCDH

Throughout her career, Dr. Spolarich has overcome obstacles and made the most of opportunities she's been given, all for the benefit of educating students and improving community health. Currently, she serves as a professor and assistant dean for research at A.T. Still University-Arizona School of Dentistry & Oral Health (ATSU-ASDOH). She is also co-director of ATSR's Center for Oral Health Research, which promotes whole person health by translating outcomes gained from clinical, behavioral, and exploratory research into advances in dental education and practice.

Dr. Spolarich always knew she would be a teacher in some capacity. Her mother was a teacher and nurtured Dr. Spolarich's love for school. While her original plan was to become a physician, her high school guidance counselor discouraged her from pursuing medical school - and college altogether. Her dental hygienist encouraged her to explore dental hygiene so she could take science courses and work as a healthcare professional. Then, right after high school, Dr. Spolarich earned her certificate in dental hygiene from the University of Pennsylvania.

Although she didn't expect to stay in the dental hygiene field, she continued her education through a degree completion program at Thomas Jefferson University. While there, she pursued coursework and completed a practicum in hospital dental hygiene. She was still interested in a career in medicine, so she took extra science classes during her summer semesters. After graduation, she moved to Baltimore to enroll in a graduate dental hygiene program at the University of Maryland. She chose that program because of its relationships with numerous hospitals and proximity to the National Institutes of Health, and eventually earned her master of science degree in dental hygiene.

"During my first year of graduate school, I suffered a hand injury, so I wasn't able to practice clinical dental hygiene," Dr. Spolarich says. "I needed to work, so I took a job as a research assistant in the Anatomy department. At the same time, I was also collaborating with a team of nurses on a clinical research project in the cancer center at Johns Hopkins Hospital. Through these opportunities, I found my calling for research."

Through her work in the Anatomy department, she became involved with animal, clinical, and drug studies. She realized she could pursue her love of medicine and research simultaneously. She also realized a research background would help her be more successful in academia. She later earned a doctorate in physiology from the University of Maryland.

Dr. Spolarich began her full-time academic career teaching at Thomas Jefferson University in the Dental Hygiene department. During this time, she also

conducted research at the Philadelphia Veterans Affairs Medical Center. Her hospital-based experiences gave her a strong background in treating medically complex patients, which is now one of her primary research interests along with pharmacology.

In her current role as assistant dean for research, she uses her various experiences to work with faculty and students at ATSU-ASDOH and across the University, increasing interprofessional collaboration on campus. She guides and supports research activities focusing on educational, clinical, and public health interventions designed to improve oral health.

Among her many recent projects, she is working with ATSU-ASDOH's Maureen Perry, DDS, MPA, MAEd, associate dean for postdoctoral education and director of The Center for Advanced Oral Health, on a study of a new model of care. This innovative model "flips the switch" of medical and dental integration by placing a physician assistant into a dental setting, currently ATSU-ASDOH's Advanced Care Clinic.

"We are studying the feasibility of this care delivery model, examining how availability of a medical provider improves access to basic medical services, such as diabetes testing and routine physicals, for patients who lack a primary care provider," Dr. Spolarich says. "It also examines how the availability of a medical provider facilitates the delivery of medically necessary dental services and reimbursement mechanisms."

Dr. Spolarich is excited about the faculty and student research happening throughout the School, including student public health research through ATSU-ASDOH's dual-degree program. She has a unique vantage point as she oversees all research activities and feels privileged to work alongside colleagues who work tirelessly to improve oral health awareness, literacy, and access.

In addition to her own research, she is an internationally recognized speaker on pharmacology and the care of medically complex patients. In fact, she has given more than 1,000 lectures based on her work. She credits her patients for being her greatest teachers and helping her shape the content of the courses she provides at ATSU and to the professional community.

Through all her efforts, she has dedicated her time to improving oral health for some of the nation's most underserved populations. She encourages those around her to be lifelong learners and agents of change. Her influence has been recognized by her peers and professional organizations, including the American Dental Hygienists' Association and the Special Care Dentistry Association.

"I love what I do," Dr. Spolarich says. "It is a gift to be able to care for vulnerable populations and educate the next generation of dental providers."



Scott Howell, DMD, MPH, '14

As a graduate of A.T. Still University-Arizona School of Dentistry & Oral Health (ATSU-ASDOH), Dr. Howell's dental education was centered on community health. He learned the importance of improving care for underserved populations as a student and, during that time, discovered his passion for public health. Now as an associate professor and director of public health dentistry & teledentistry at ATSU-ASDOH, he strives to find innovative and meaningful ways to improve health outcomes and access to care.

Some of Dr. Howell's most notable work has revolved around teledentistry. He was one of the first dental educators to develop a teledentistry curriculum within a U.S. dental school. Although teledentistry is not a new concept, the COVID-19 pandemic highlighted its use and benefits.

"I've seen community health embrace teledentistry more rapidly than private practice, in terms of access," Dr. Howell says. "Teledentistry won't solve disparities, but it can help reduce them."

Dr. Howell sees the value in teledentistry and how it may be used in different scenarios. He has taught healthcare providers and students around the world about the different applications of teledentistry to reach underserved populations. When he has led these presentations and discussions, the topic has sparked conversations and ideas on new ways to use the technology.

"At ATSU, we've been able to broaden people's understanding of teledentistry," Dr. Howell says. "I'm proud of the way we've exposed students to various ways teledentistry can be used."

In addition to his teledentistry endeavors, he serves as a public health preceptor for student practicum projects in A.T. Still University-College of Graduate Health Studies' Master of Public Health program. Many of these projects have resulted in increased awareness, funding, and clinical care for youth in juvenile detention.

"A student presented his findings from his project to administrators at the Maricopa County Juvenile Detention Center, and as a result of his work, we have begun the conversation around how we can increase services offered to this population," Dr. Howell says.

Dr. Howell is also working with dental hygiene and physician assistant colleagues to develop a first-of-its-kind medical provider learning experience for delivering dental local anesthesia. When uninsured and underinsured individuals have a toothache, they often end up in emergency rooms, usually late at night when dental offices are closed. This experience will offer medical providers and students a hands-on opportunity to know when and how to give dental local anesthesia, eliminating the need to prescribe opioid pain medications.

Furthermore, Dr. Howell and the public health team at ATSU-ASDOH continue to find unique partnerships with community organizations to address health needs. Although partnerships continue to change based on

the dental curriculum and healthcare environment, two examples of recent partnerships include Catalytic Health Partners and the Maricopa Reentry Center.

Catalytic Health Partners sends nurse practitioners and mental health professionals directly to the homes of the highest users of the Arizona Medicaid program. According to Dr. Howell, these individuals make up a very small amount of Medicaid users in Arizona (about 3%), but they use a large amount of the Medicaid funds (about 50%).

"Dental students spent time with these individuals in their homes and saw how social determinants of health impact the well-being of those living in poverty," Dr. Howell says. "These experiences also allowed students the opportunity to gain a better understanding of the challenges underserved communities face when it comes to obtaining healthcare."

Through the partnership with the Maricopa Reentry Center, a program run by the Arizona Department of Corrections, ATSU-ASDOH students and faculty provide dental assessments for men undergoing substance misuse counseling and rehabilitation. Before the pandemic, students and faculty visited the facility in person. ATSU-ASDOH residents, and occasionally students, would then provide treatment at the Advanced Care Clinic to address urgent dental needs.

Today, because of the pandemic, these assessments are now held virtually through Zoom. If patients have an urgent dental condition, they are still able to come to ATSU-ASDOH for limited treatment. However, Zoom appointments allow faculty and students to triage patients and ensure they are able to provide treatment before patients travel 50 minutes to the clinic.

"Prior to this partnership, the men had no access to dental care and would often have to quit the program because of dental problems," Dr. Howell says. "After partnering with ATSU-ASDOH, not a single participant left the program because of a dental problem."

Besides leading teledentistry efforts, serving as a preceptor, and partnering with colleagues and community organizations, Dr. Howell is passionate about dental advocacy. He developed a curriculum for students on advocating for patients when legislation is being discussed within state and federal government and how to be the voice for their patients' needs.

"Advocacy is one of the areas of public health that takes very little time to learn and even less time to actually do," Dr. Howell says. "By empowering our students to engage with their legislators and members of Congress, communities around the country can benefit from the advocacy of our graduates."

Nearly everything Dr. Howell teaches in the classroom is a result of pilot projects or his own experiences working in a variety of healthcare settings. He has learned unique solutions to various problems and to identify gaps in knowledge. In addition, Dr. Howell ensures he completes any new experiences himself before involving students. His ultimate goal is to

challenge the status quo and for his students to do the same.

"These various endeavors almost always get translated to the classroom where we take our unique experiences working with underserved communities and introduce students to several overarching themes for addressing the healthcare needs of the underserved," Dr. Howell says. "These overarching themes include alternative approaches to delivering healthcare, clinical impacts of the social determinants of health, and developing empathy for our patients and our communities."



ATSU grant awards target underserved communities

Through a special, one-time internal offering, ATSU funded grant awards to increase scholarly activity with an emphasis on improving health of underserved communities. The purpose of these awards, titled ATSU Underserved Community Scholarly Improvement Grants, was specifically aimed at supporting the mission-focused scholarship theme of ATSU's Strategic Plan. In 2022, the following two proposals were awarded funding.

“Kirkville Community Health Needs Assessment”

Valena Fiscus, DO, MPH, '13

Dr. Fiscus, an assistant professor of internal medicine at A.T. Still University-Kirkville College of Osteopathic Medicine (ATSU-KCOM), is leading a project to assess health needs of the Kirkville community. The last community health needs assessment for Adair County, where Kirkville is the county seat, was completed in 2011. Since that time, the Kirkville area has changed.

Today, Kirkville is a larger and more diverse community with different health needs. According to Dr. Fiscus, the city also has more poverty and challenges with mental health and illicit drug use, based on the increased number of people seeking help for these issues.

“Healthcare in rural communities has gradually declined over the last several decades for a combination of reasons, including lack of physician recruitment and retention and funding for services like critical access hospitals,” Dr. Fiscus says. “The demographic landscape of rural communities has also changed, and after COVID-19, all of this was amplified.”

The lack of healthcare services in Kirkville and its surrounding communities was apparent to third-year ATSU-KCOM student Mary Bailey, who emailed Dr. Fiscus about the initial idea for a needs assessment project. Although the two of them knew it would be a big undertaking, they felt it was too important to not pursue it.

The project has three phases with the overall goal of revealing specific gaps of need in the community and closing those gaps through collaboration among organizations or additional grant funding. Phase one, which is funded by the ATSU grant, assesses the community's opinion on insufficient health needs through surveys and focus groups. These surveys have been translated into four different languages: English, Spanish, French, and Lingala.

Phase two involves assessing the community's health organizations and services provided, including funding sources, to determine what the true gaps are. These gaps will be compared with the gaps identified from survey responses. Then, this data will be used to connect existing services with community members who may not be aware those services are available.

Phase three addresses the remaining gaps by obtaining additional funding through grants, donations, or partnerships with larger institutions.

While Bailey is now completing clinical rotations, Dr. Fiscus has additional ATSU-KCOM students helping with the project. The assessment has gained support

from community stakeholders, including all Kirkville medical clinics allowing display and distribution of surveys. From data collected so far, major areas of concern are mental healthcare access, substance abuse issues, and access to medical specialists. One example of these areas of concern is Kirkville losing access to cancer radiation treatments, with patients now driving 90 minutes for treatment, sometimes daily.

“The ATSU Underserved Community Scholarly Improvement Grant was perfect for us as applicants because our survey assesses where Kirkville is in terms of being underserved in certain areas of health,” Dr. Fiscus says. “And most importantly, it will be the community's voice we hear.”

“Student-Doctor Translators: An Innovative Approach to Reducing Language Barriers for Patients with Limited English Proficiency”

Romana Muller, EdD, MSDH, RDH, '22

The cultural diversity of America is increasing, and St. Louis is no exception. At the St. Louis Dental Center, A.T. Still University-Missouri School of Dentistry & Oral Health's clinical site, the patient population reflects this increase in cultural diversity. More than 4,000 patients at the center speak a language other than English, and many have limited English proficiency. Currently, these patients speak a total of 48 different languages.

Adding to this diverse patient population are refugees. St. Louis is one U.S. city with a refugee resettlement organization, the International Institute of St. Louis, which resettles refugees as a subcontractor of the U.S. Committee for Refugees and Immigrants. In the last few years, the city has received hundreds of refugees from war-torn countries, including Afghanistan and Ukraine, with many seeking dental care at the center.

As an immigrant and former refugee from Czechoslovakia, Dr. Muller, assistant professor, is passionate about improving patient-provider communication for those with limited English proficiency. When she joined the St. Louis Dental Center, she saw the language barriers patients faced and the need for increased language assistance in the form of translated (written) materials. While the center offers interpretation (verbal) services to patients in most languages, Dr. Muller noticed translated patient forms were limited in the number of languages offered.

“As a child, I had to interpret for my parents during healthcare appointments,” Dr. Muller says. “I understand how these barriers affect our patients.”

Dr. Muller envisioned a solution to this issue by tapping into the diversity of ATSU students and faculty members and using their linguistic talents to translate existing clinical forms into different languages. This initiative began in 2021 when Dr. Muller received a grant from the Lutheran Foundation of St. Louis* to employ bilingual students as translators.

“In the U.S., the rule is anyone who can read and write fluently in another language can translate documents and certify their own translation,” Dr. Muller says. “However, I developed a level of quality control where faculty members and other healthcare professionals who are native speakers of another language are able to review the students' work and check for accuracy.”

Phase one of her original study, “In Any Language – Improving Oral Health Translates into Better Lives,” investigates perceptions of patients with limited English proficiency on the effectiveness of clinical forms translated by student translators. Now with funding from the ATSU Underserved Community Scholarly Improvement Grant, Dr. Muller is able to continue employing student translators and develop additional project phases, including launching a chairside multilingual oral health literacy assessment tool with educational components (Learn more about this assessment tool on Page 39.).

Translating forms into different languages takes time. However, Dr. Muller and her student translator team are making progress. Of their goal to translate 20 clinical

forms, 18 forms are in various stages of translation in the following 12 languages: Arabic, Czech, Dari, Farsi, Japanese, Pashto, Romanian, Russian, Spanish, Ukrainian, Vietnamese, and Urdu. The team has also translated numerous documents for research and community service activities. As more bilingual students enroll at ATSU and want to help with this project, more forms will be completed.

Furthermore, the new forms are being redesigned to also include the English text, rather than having only one language per form. This bilingual format is beneficial because it keeps the provider from comparing questions and answers on two separate forms, reducing the chance for miscommunication and medical errors.

“Many healthcare institutions, including dental clinics, struggle with facilitating linguistically appropriate communications between providers and patients with limited English proficiency, which may lead to lower quality of care,” Dr. Muller says. “Ultimately, I would love for our clinical forms to be available online for anyone to access and improve care for vulnerable populations.”

*** Lutheran Foundation of St. Louis is the grant-making ministry of 74 St. Louis area Lutheran Church – Missouri Synod congregations. The Foundation's vision is to see the Church brought into the lives of hurting people and people included in the healing life of the Church.**





Museum of Osteopathic Medicine earns accreditation, serves as a global resource

By Arselia Gales



On July 13, 2022, the American Alliance of Museums (AAM) granted accreditation to the Museum of Osteopathic Medicine, an honor bestowed to fewer than 1,100 of the nation's estimated 33,000 museums.

The Museum of Osteopathic Medicine, located on ATSU's Kirksville, Missouri, campus, is one of only 20 accredited museums in Missouri, including The Nelson-Atkins Museum of Art in Kansas City and Saint Louis Art Museum. The museum is also the state's only AAM-accredited midsize museum not in a major city.

AAM is the premier accrediting body for museums in the U.S., and accreditation brings national recognition to the Museum of Osteopathic Medicine for its commitment to excellence, accountability, high professional standards, and continued institutional improvement.

"When we started this accreditation process, we had 100 years' worth of stuff," says Jason Haxton, MA, director, Museum of Osteopathic Medicine. "We've been accumulating items, keeping up with what's coming in, and going backward to fix things."

The path toward accreditation was a rigorous two-year process beginning with the museum staff putting together core documents, which took about six months. These documents included information on how the museum manages its collection, handles emergencies, and records and cares for items.

Putting together the core documents was just the beginning. Once the documents were submitted to AAM, the museum went through an extensive revision process. Then, once core documents were approved, the museum staff completed a six-month self-evaluation. Next, two professionals from other accredited museums visited the Museum of Osteopathic Medicine to rate the museum and confirm the self-evaluation was accurate. Finally, AAM completed its final review, which led to the museum earning accreditation in July 2022.

With AAM recognition, the museum team looks forward to new opportunities for growth, outreach, and funding for their work. The accreditation designation also helps facilitate loans between AAM member museums, which would allow more osteopathic artifacts to be studied and exhibited at the Museum of Osteopathic Medicine.

"We were told we were quite amazing for our size because it's harder for a smaller museum to do all these things," Haxton says. "They were very impressed."

However, 2020 was not the first time the museum began the accreditation process. Haxton says he and his team tried once before in 2014. The core documents were approved, but the museum fell short in other areas.

"You must have at least 80% of your collection processed online. We were probably at 55% and approximately 30,000 artifacts short. We withdrew from the process. We wanted to do it right and didn't try again until 2020," he says.

And while many museums may stop the accreditation process, no one has started again.

"We are the only museum to stop, reassess, fix, and return," Haxton says.

Now, because of the museum's accreditation, some of Haxton's lectures are used for continuing medical education. He's lectured in Brazil, France, Germany, and Japan – a testament to the museum's reach.

In fact, the museum receives requests from all over the U.S. and abroad. The museum has fulfilled requests from people in Arkansas, California, Idaho, and Virginia, as well as from England, France, Argentina, and Switzerland. The museum has already received requests from Germany, Poland, and Italy. These individuals request anything from genealogy research to images of their family members. Some just want to learn more about osteopathic medicine and the legacy of A.T. Still, DO. In addition to online visitors from around the world, the museum hosts international visitors.

"We've proved that even though we're in Kirksville, it doesn't mean our audience is no bigger than a 10-mile radius," Haxton says. "It gives credibility to the value we bring."

Advances and challenges of oral health



ATSU faculty contribute to milestone National Institutes of Health report

By Sami Harris

Kim Perry, DDS, MSCS, FACD, associate vice president of university strategic partnerships at ATSU and board chairman of the National Dental Association (NDA), and Joan Davis, PhD, RDH, former assistant dean for research at A.T. Still University's Missouri School of Dentistry & Oral Health (ATSU-MOSDOH), were invited to contribute to a report from the National Institutes of Health (NIH), "Oral Health in America: Advances and Challenges." This report, which is released every 20 years, was published in January 2022.

"This important document was a culmination of two years of research and writing by over 400 contributors," Dr. Perry says.

Drs. Perry and Davis were the only faculty from ATSU asked to participate.

Dr. Perry's contributions are found in Section 5: Pain, Mental Illness, Substance Use, and Oral Health. In this section, Dr. Perry discusses the impact of substance abuse on oral health.

Generally, adult and adolescent patients with substance misuse have poor oral hygiene, which may lead to high caries rates, severe periodontal disease, xerostomia, missing teeth, and oropharyngeal cancer caused by HPV. These patients may also experience increased candida, gingival enlargement, and temporomandibular joint disorder caused by clenching of the jaw.

Dr. Perry also discusses barriers to improving health outcomes in patients with substance misuse. For example, healthcare professionals may lack the time and education to address substance misuse. Patients may be unwilling to discuss matters related to substance misuse or feel stigmatized. Other barriers include a lack of screening, counseling, intervention, and knowledge and education. There may also be resistance from clinic staff, or the dental practice may be an ineffective location for addressing substance misuse.

Dr. Perry indicates the literature calls for action within the dental community.

"To participate fully in an integrated system of healthcare, oral health professionals must acquire new competencies related to the behavioral health aspects of substance use and mental illness to provide optimal oral healthcare for these patients and appropriately refer those with substance use disorders and mental health problems," Dr. Perry says.

She describes her research process, explaining how she met with University leadership to ensure she would have the necessary allotted time to commit to the document.

"I immediately recognized this would take a while with my other regular work assignments, so I contacted the ATSU library director, Hal Bright," Dr. Perry says. "I shared the opportunity and asked if he could help, and he agreed. He assembled hundreds of peer-reviewed articles for me to read and formatted the references into EndNote. Working with someone like Hal was a huge help for me."

Dr. Davis, who retired from ATSU-MOSDOH in 2022, also contributed to Section 5: Pain, Mental Illness, Substance Use, and Oral Health. Her work is included in Chapter 1: Status of Knowledge, Practice, and Perspectives: Marijuana. In this section, Dr. Davis discusses the impact of marijuana on oral health.

Specifically, Dr. Davis addresses how marijuana use has increased over the past three decades. People who use marijuana have poorer oral health than those who do not use it. Marijuana users have higher rates of decayed, missing, and filled teeth; more plaque deposits; and less healthy gums. Further, marijuana and cigarette smokers brush their teeth less often and visit their dentist less regularly.

Additionally, she addresses the lack of literature on the relationship between marijuana and oral health, with many studies published more than two decades ago. Current knowledge suggests a relationship between marijuana use and oral diseases and conditions, but gaps in the literature point to the need for additional investigation.

Dr. Davis says her research process included an extensive literature review, which included historical information on cannabis use, literature published in the 1970s, and current research on the impact of cannabis on oral health.

"Because of the War on Drugs in the 1980s, peer-reviewed research was limited with much more now available from the 2000s forward," Dr. Davis says. "I compiled hundreds of peer-reviewed and popular articles from around the world and included 55 key references in the final 10-page report."

Drs. Davis and Perry explain the impact of the publication.

"This report will be used by policymakers and legislators to guide initiatives and funding for years to come," Dr. Davis says.

"I am most proud that 'Oral Health in America: Advances and Challenges' will continue to be read nationally and internationally," Dr. Perry says. "This publication provides solutions to improve outcomes for the populations addressed in ATSU's and NDA's mission statements. It also speaks to integration and how we — as medical, dental, and behavioral health providers, can play a meaningful role in improving patient and population oral and overall health outcomes with an additional focus on the social determinants of health."

Drs. Davis and Perry also reflect on the honor of being invited to contribute to this publication.

"Being invited to contribute to this seminal report has been one of the highest honors in my academic career," Dr. Davis says.

"As a distinguished NIH clinical research scholar whose research interests are health disparities, untreated dental caries, and community participatory research," Dr. Perry says, "I was truly honored to have been asked to contribute to this historical document."



Dr. Kim Perry



Dr. Joan Davis



Leading and learning

ATSU participates in four major conferences across the U.S.

By Arselia Gales

Every year, hundreds of ATSU students, faculty, and staff attend and present at an array of conferences around the country. In recent years, the University has been represented at large conferences, including Beyond Flexner, Community Health Institute & Expo, Interdisciplinary Biomedical Research Symposium, and International Consortium on Manual Therapies. In addition to numerous faculty, staff, and students attending these conferences, ATSU plays an integral part in planning these conferences, a testament to the University's mission and dedication to the healthcare profession.

Beyond Flexner Conference

The Beyond Flexner Conference, now called the Social Mission Alliance National Conference, was most recently held March 28-30, 2022, in Phoenix, Arizona. The three-day event, co-hosted by ATSU and Arizona State University's Edson College of Nursing and Health Innovation, featured keynote speeches and breakout sessions gathering leaders with a goal to bring about meaningful change. With nearly 200 ATSU students, faculty, and staff in attendance, the conference drew representatives from a wide range of healthcare disciplines to collaborate on innovation in healthcare education. Attendees were presented topics aimed to help healthcare providers meet the needs of those in urban and rural communities facing complex healthcare issues.



Community Health Institute & Expo

The National Association of Community Health Centers (NACHC) held its Community Health Institute (CHI) & Expo from Aug. 27-29, 2023, in San Diego, California. NACHC and ATSU are strategic allies in the cause of caring for those most in need. With more than 70 faculty, staff, students, and regional directors of medical education in attendance, ATSU was recognized during the opening plenary sessions and at numerous education sessions and committee meetings. Hundreds of health center allies, partners, and alumni visited ATSU's reception to express gratitude for the University's efforts and strengthen relationships with their community health centers.



Interdisciplinary Biomedical Research Symposium

The 15th annual Interdisciplinary Biomedical Research Symposium (IBRS) was held Nov. 11, 2023, on the Kirksville, Missouri, campus, and virtually. IBRS is open to undergraduate and graduate students, health professions students, residents and clinicians, faculty, and researchers. IBRS is an annual no-cost event hosted by the A.T. Still Research Institute. It gives students, residents, faculty, and regional researchers the opportunity to present their current biomedical and allied health research and provides a foundation for promoting collaborative research with the institute. Program Co-chair Brian F. Degenhardt, DO, delivered the opening remarks with more than 170 people in attendance. Eighty-four posters were presented live and online. See Page 50 for the 14th annual IBRS statistics.

International Consortium on Manual Therapies

The inaugural International Consortium on Manual Therapies (ICMT) event was held virtually from May 4 to June 3, 2022. Led by the A.T. Still Research Institute in collaboration with an international committee of seven manual therapy specialists, the event focused on summarizing the current evidence on manual medicine therapies across multiple professions, while assessing the limitations of current profession-specific terminology. Of the 182 registrants, 20 ATSU faculty, staff, and alumni were involved in planning, coordinating, presenting, or participating in ICMT. Brian F. Degenhardt, DO, of the A.T. Still Research Institute, was one of five keynote speakers.



Top: Daniel E. Dawes, JD, director, Satcher Health Leadership Institute, Morehouse School of Medicine, provides the first keynote address at the Beyond Flexner Conference.

Middle: Health professionals and students attend breakout sessions at the Beyond Flexner Conference.

Bottom: Roxanne Fahrenwald, MD, reviews research posters during the poster session at the Beyond Flexner Conference.

Top: Students, faculty, and staff participate in the annual NACHC CHI & Expo.

Middle: Students, residents, faculty, and regional researchers have the opportunity to present their research at IBRS.

Bottom: Students receive awards for their winning research presentations at IBRS.

Redefining the oral-systemic link

Satish S. Kumar, DMD, MDSc, MS, professor and director, periodontics, A.T. Still University's Arizona School of Dentistry & Oral Health, is determined to find the strength of the association between periodontal disease and systemic diseases, such as cardiovascular disease. While good oral health is associated with and leads to good overall health, he says the two may not be as causally linked.

Q: What exactly are you doing in this project?

A: Periodontal disease has been associated with numerous systemic diseases, including diabetes, cardiovascular diseases, rheumatoid arthritis, and pregnancy complications. One common misunderstanding of such research is association implies causation. Therefore, some may think periodontal disease is the cause of these systemic diseases. However, association does not imply causation.

There are several criteria listed in the Bradford Hill criteria we need to look at to prove causality. First, we need to look at the strength of the association. Usually, in statistical terms, the association strength is presented using the odds ratio (OR) or relative risk (RR). If the OR or RR is one or less than one, we conclude there is no association. If either of these numbers is greater than one and the data is statistically significant, we conclude there is an association. In the past, researchers have suggested the OR or RR should be greater than three or four to establish a strong association and think about possible causality. Even though other important Bradford Hill criteria must be fulfilled, most periodontal-systemic disease literature shows the OR or RR is between one and two. This implies the observed association, though statistically significant, may be caused by confounding factors like smoking and biases in the research design.

I am reviewing the strength of association in several recent studies by looking at the association between periodontal disease and various systemic diseases. In addition to other important factors, I am analyzing study design, sample size, biases, and confounding factors. I would like to recognize two of my mentors in the evidence-based dentistry field, Drs. Elliot Abt and Robert Weyant with whom I worked on a commentary on this topic published in the *Journal of the American Dental Association*.

Q: What do you hope to achieve?

A: As stated in the published commentary with my colleagues, my hope is periodontal disease, being a global burden, is prevented and treated for the sake of good oral health. One need not justify treatment of periodontal disease because it is associated with, or causes, numerous systemic diseases. Based on a huge body of evidence, we already know good oral health contributes to good overall health. Diabetes and periodontitis, for example, have strong evidence of association, and treating periodontal disease has shown to improve diabetic treatment outcomes and vice versa.



Dr. Satish Kumar

Additional studies may not be necessary to prove this association further. Future studies looking at other periodontal-systemic disease associations could be focused on areas where there is a biological plausibility, and research resources could be targeted toward actual prevention and treatment of periodontal disease. For example, physicians diagnosing diabetes in their patients could refer their patients to their dental colleagues to prevent or manage periodontal disease, as diabetic patients are at high risk for developing periodontal disease.

Q: Why is your research important?

A: Understanding the strength of association would allow us to narrow down more important associations from the far-fetched associations. If we could understand the associations, we would know when additional studies would be useful to prove causality and when additional studies are not likely to add more to our understanding.

Irrigant flow in root canal therapy

A.T. Still University-Arizona School of Dentistry & Oral Health (ATSU-ASDOH) graduate Jonathan Abrams, DMD, '23, is investigating an important topic in the endodontic community. With his mentor, Inder Raj S. Makin, MD, PhD, a professor from A.T. Still University-School of Osteopathic Medicine in Arizona and ATSU-ASDOH; Bradley Gettleman, DDS, MS, an endodontist; and Harpreet Kaur, a fourth-year ATSU-ASDOH student, Dr. Abrams is studying irrigant delivery in root canal treatment. To conduct this study, the team is using \$500 from the ATSU Student Research Supplies Request Program and is leveraging use of an ATSU-patented microflow system as part of the benchtop setup.

Q: What exactly are you doing in this project?

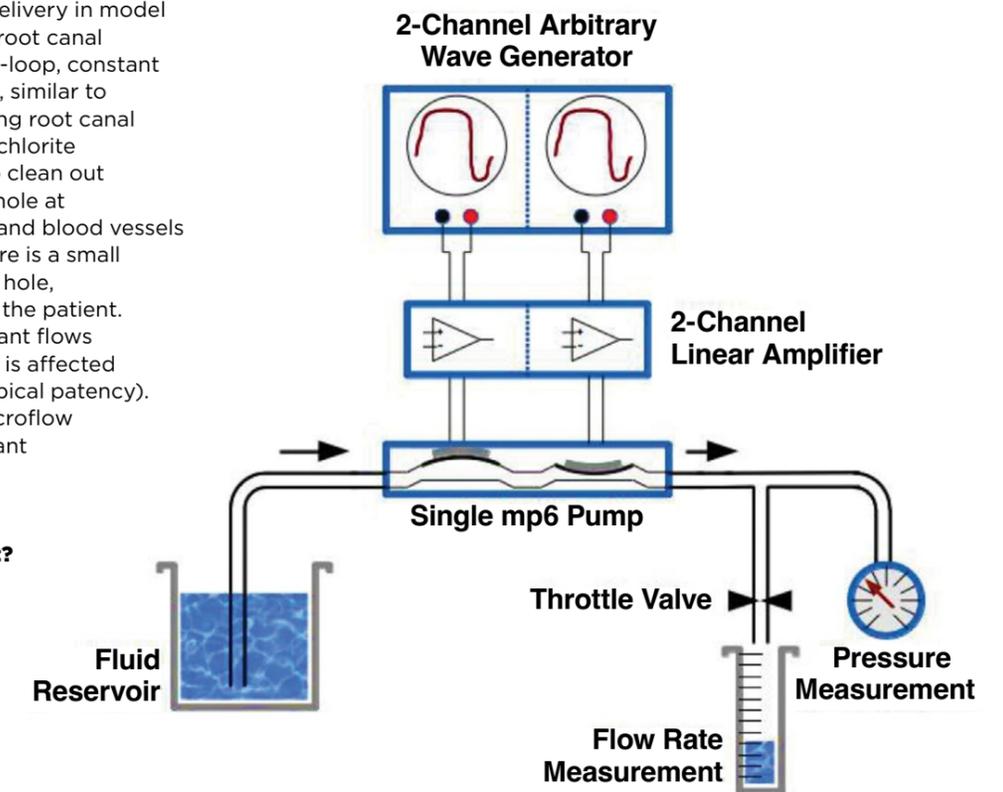
A: The current study, "Effect of Apical Patency on Hypochlorite Extrusion in a Constant Flow Environment," focuses on irrigant delivery in model teeth that have received simulated root canal therapy. We are producing an open-loop, constant flow environment to deliver irrigant, similar to new endodontic technologies. During root canal procedures, the clinician uses hypochlorite (household bleach) as an irrigant to clean out the canals. All teeth have a natural hole at the tip of the root where the nerve and blood vessels enter. When cleaning the tooth, there is a small chance for hypochlorite to exit that hole, which may cause complications for the patient. Our study is testing how much irrigant flows out the tooth and whether this flow is affected by how large we shape that hole (apical patency). We are using model teeth and a microflow pump to simulate the kind of constant flow environment used with newer endodontic technologies.

Q: Why is your research important?

A: Hypochlorite exiting the root, called extrusion, may be painful and represent a potentially dangerous complication of root canal treatment. Therefore, it is important to understand what dimensions the tooth could be shaped to before there is a likelihood of extrusion.

Q: What do you hope to achieve?

A: Right now, we are hoping to characterize the irrigant extrusion in our model teeth. We want to see whether apical patency affects extrusion and whether there is a specific patency at which extrusion becomes problematic.



This diagram illustrates the benchtop setup for pump controller development in single-pump configuration.



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Strengthening the physician assistant workforce pipeline

Michelle DiBaise, DHSc, PA-C, DFAAPA, '14, professor, chair, and program director, physician assistant studies, A.T. Still University's Arizona School of Health Sciences, and colleagues Kim DeVore Kochanoff, MS, PA-C, DFAAPA; Annette Bettridge, EdD, PA-C, FNP; Randy Danielsen, PhD, PA-C emeritus, DFAAPA; and Dean Ann Lee Burch, PT, EdD, MPH, are working to strengthen the community-based health workforce by increasing the number and diversity of primary care physician assistants (PAs) in rural and underserved settings and by improving education supporting access to and delivery of primary care and behavioral health services nationwide. The project, "Primary Care Physician Assistants as Change Leaders: Improving Access to Quality Behavioral and Mental Health Care for the Nation's Rural and Underserved*," is in its fourth year. The group received a Health Resources and Services Administration grant for nearly \$1.5 million over five years.



PA students participate in a lab exercise.

Q: What exactly are you doing in this project?

A: This project increases the number and diversity of ATSU PA clinical education sites in medically underserved communities and strengthens the PA workforce pipeline for applicants from these communities. It calibrates faculty and enhances PA didactic education in key priority areas of substance use disorder, medication-assisted therapy, behavioral and mental health, and provider wellness. It also calibrates preceptors and enhances PA education in the assessment and application of community-based behavioral/mental healthcare.

Q: What do you hope to achieve?

A: We hope to strengthen the PA workforce pipeline from medically underserved communities through our Hometown Scholars program and partnership with community health centers (CHCs). Our goal is to expand the number of CHC partners across the U.S. since the program moved to an increased class size of 100 in July 2023. We want to infuse the didactic curriculum with more than 50 contact hours in behavioral health, care of vulnerable populations, social determinants of health, and medication-assisted therapy education. We also want to expand didactic and clinical interprofessional education opportunities and add clinical year papers focusing on primary care, social determinants of health, and systems-based healthcare analysis.

Q: Why is your project important?

A: National demand for primary care is growing because of an increasingly aging population, escalating incidence of chronic disease, and rising numbers of insured persons as a result of the Affordable Care Act. Demand is also rising for primary care providers to administer mental and behavioral healthcare, especially for underserved populations who struggle to access care. The supply of primary care providers is inadequate, and PAs are ideally suited to address these provider shortages.

** This project is supported by the Health Resources and Services Administration (HRSA) of the U.S. Department of Health and Human Services (HHS) as part of an award totaling \$1,496,722 with 0% financed with non-governmental sources. The contents are those of the authors and do not necessarily represent the official views of, nor an endorsement, by HRSA, HHS, or the U.S. Government. For more information, please visit [HRSA.gov](https://hrsa.gov).*

*ATSU alumni who implement the 20% tuition discount are encouraged to contact a tax professional regarding any tax implications. All discounts are independent and cannot be combined with any other offers.

Minimizing the occurrence of dance-related injuries

A.T. Still University-Arizona School of Health Sciences' Joshua Honrado, DAT, ATC, CSCS, RYT, '21, along with faculty members Kenny Lam, ScD, ATC, FNATA, and Curt Bay, PhD, noticed an increase in dance-related injuries from 2000-13 and set out to learn more about these injuries and how to provide better preventive care. Their research, "Epidemiology of Patients with Dance-related Injuries Presenting to Emergency Departments in the United States, 2014-2018," was published in *Sports Health* in 2021. They also virtually presented their research findings at the National Athletic Trainers' Association meeting in July 2020.

Q: What exactly did you do in this project?

A: The purpose of this study was to describe the rates and patterns associated with dance-related injuries reported by emergency departments (EDs) between 2014 and 2018. The study was a retrospective analysis of de-identified data extracted from the National Electronic Injury Surveillance System. Data were collected on age, sex, race, disposition (outcome of presentation), and location on the body where the injury happened. Free text data regarding the mechanism and nature of the injury were also included. Only injuries that occurred during structured dance events (e.g., dance class, dance competition, dance school, dance practice) or injuries that mentioned specific dance terminology (e.g., style of dance, dance motion, dance clothing, dance equipment) were included.

Q: Why is your research important?

A: Previous research indicates there was a 33.4% increase in total number of dance-related injuries between 2000 and 2013, suggesting they are becoming a frequently managed injury in EDs. Although these findings provide initial insight about dance-related injuries reported by EDs, data have not been updated since 2013. Therefore, the purpose of our study was to describe the rates and patterns associated with dance-related injuries reported by EDs between 2014 and 2018. Obtaining a better understanding about the specific demographics of those who seek care in EDs will provide insight about which populations should be targeted for education on preventive care and access to on-site healthcare.

Q: What do you hope to achieve?

A: Our findings suggested dance-related injuries reported to EDs increased over a five-year period (2014-18). Most dancers were female and between 10-18 years old. Nearly half of the patients reported to the ED with a sprain/strain, and almost all patients were treated and released. These research findings will hopefully provide insight for healthcare providers about the demographics and types of dance-related injuries that may present at EDs and illustrate the need for dance schools and companies to have on-site healthcare to mitigate health risk for their dancers.



Dr. Joshua Honrado



As an athletic trainer at Harkness Center For Dance Injuries, Dr. Joshua Honrado provides backstage care to Broadway shows and elite dance companies, as well as injury prevention assessments and educational lectures to the dance community.



Evolution of abortion laws requires change in curriculum

A.T. Still University’s College for Healthy Communities faculty members Kevin A. Hickman, DMSc, MJ, MHA, CHC, PA-C; Brandy A. Brooks, EdD, MHS, PA-C; and Corey M. Cooper, MHRT-CSP, worked together to publish “Evolving Abortion Laws Require Increased Integration of Legal Education Into Medical Education Curriculum” in the *Journal of Physician Assistant Education*. Using legal history of abortion regulation to demonstrate how the three branches of government interact and regulate healthcare delivery as background information, they discuss the need for increased legal and ethical instruction within education for entry-level physician assistants (PAs). Additionally, they give methods for how to approach this topic professionally and in an unbiased manner, without compromising beliefs.

Q: Why is your project important?

A: We believe medical educators should be prepared to address politicized healthcare topics, including abortion, in a nonpolitical, professional fashion. This is necessary to ensure the students’ needs are met and, ultimately, their future patients’ needs are met. Instruction on responding to political discussion emerging during practice must include how to communicate with colleagues and patients in a way that preserves therapeutic or collegial relationships and does not provoke moral distress. Seeking guidance, students in the Central Coast PA program began questioning faculty after the Dobbs v. Jackson Women’s Health Organization decision. Students were curious about how this decision, as well as other court decisions, would affect them as future providers.

Q: What do you hope to achieve?

A: Originally, we only aimed to meet the requests of PA students to have a curriculum on abortion regulations. We hoped the seminar would provide students with learning opportunities and would further the responsive relationship the program was developing with our first cohort. Through continued work on the seminar, we recognized the method we employed and the consequences to educators from this method would have a further reaching impact than just that first seminar. We wrote and published the article hoping other educators would view it as an unbiased presentation of the history and legal structure of our government through the lens of abortion regulation. We also hoped educators would use our methods as a model for teaching timely and politicized topics

relevant to medical provider education. Ultimately, the goal was to encourage others to leave their comfort zone and to tackle unfamiliar topics to meet students’ needs. As the project continues, we hope students feel empowered to know how to address regulatory and political changes as they occur in a way that strengthens, not hinders, their relationships with patients without compromising beliefs.

Q: What findings do you have so far, if any?

A: We have received positive feedback from students and educators regarding relevance and applicability of our suggested techniques for fulfilling professional obligations without engaging in political discourse.



Dr. Kevin A. Hickman



Dr. Brandy A. Brooks



Corey M. Cooper

Increasing public health leadership in Missouri

A.T. Still University-College of Graduate Health Studies' (ATSU-CGHS) Marisa Hastie, EdD, MS, ACSM EP-C, FACSM, dean, and Terry Wise, DMin, PhD, JD, associate dean for online operations, are leading an effort to increase the capacity of Missouri's public health workforce. Through the Missouri Department of Health and Senior Services, Office of Rural Health and Primary Care, they received more than \$3.5 million in grant funding to offer the Missouri Public Health Workforce Certificate* program at the College.

Q: What is the purpose of your project?

A: The aim of this project is to increase public health leadership in rural Missouri and among racial/ethnic diverse individuals either working in public health or interested in working in public health settings. The pandemic highlighted the importance of public healthcare workers in rural, suburban, and urban communities. The needs of these communities are unique and diverse, and public health workers are often on the frontlines for responding to those needs. Additionally, we need to do more to diversify the public health workforce to more accurately represent the communities they serve. This project is all about bolstering the public health workforce, improving knowledge and skills of those workers, and positively impacting the health of Missourians in the long term.

Q: What exactly are you doing in this project?

A: To offer this certificate program, we have teamed up with colleagues Jeri Speak, enrollment manager; Aesha Turner, DHEd, MS, MCHES, '21, business operations manager; Lee Bonnel, operations manager; Mary-Katherine McNatt, DrPH, MPH, MCHES, CPH, COI, public health chair and professor; Bethany Clatt, academic advisor; Carrie Gaines, former post-award compliance and management director, sponsored programs; and Don Altman, DDS, DHSc, EdD, MPH, MBA, MA, '12, associate vice president, academic affairs.

The goal was to enroll up to 155 participants from at least 50% of Missouri's 114 counties. Tuition and fees are fully covered by the grant. The program consists of four courses taught by ATSU faculty and prepares students to work in state and local health departments, community health centers, rural community programs, and nonprofit organizations. These courses provide a basic understanding of public health, epidemiology, public health disparities, health inequities, and emergency preparedness, as well as assessing a community's health needs.

Of those participants, 30 will go on to pursue a fully funded master of public health degree at ATSU. As our project gained momentum, we realized the demand for this type of education and experience far exceeded our funding and capacity. Therefore, a 20% discount has been extended for the remaining participants to earn a master of public health degree at ATSU in the future.

Q: What do you hope to achieve?

A: Through this grant, we have provided 162 fully funded, graduate-level education opportunities for Missouri residents working in public health or who have an interest in joining the public health workforce. The ripple effects of this grant will be endless. These public health workers will go on to influence the lives of residents in their communities and share their knowledge with co-workers.

*** This project is supported by the Centers for Disease Control and Prevention (CDC) of the U.S. Department of Health and Human Services (HHS) as part of a financial assistance award totaling \$35,569,951 with 100% funded by CDC/HHS. The contents are those of the author(s) and do not necessarily represent the official views of, nor an endorsement, by CDC/HHS or the U.S. Government. ATSU-CGHS received a portion of this funding from the Department of Health and Senior Services, Office of Rural Health and Primary Care to expand efforts to address health disparities caused by COVID-19.**

Drs. Terry Wise and Marisa Hastie



Osteopathic manipulative medicine practice during the COVID-19 pandemic

A.T. Still University's College of Graduate Health Studies graduate Corey Luebbering, MPH, '23, along with A.T. Still Research Institute's Brian Degenhardt, DO; Jane Johnson, MA; G. Franklin, MBA; and Sara Amini-Rad, MPH, completed a research project titled "The Effects of the COVID-19 Pandemic on the Practice of OMM." This project, which Luebbering presented as a poster at the 2022 Interdisciplinary Biomedical Research Symposium, focused on practicing clinicians' ability to treat patients with osteopathic manipulative medicine (OMM) during the COVID-19 pandemic, including patients with COVID-19 symptoms and long COVID and those seeking regular treatment for issues not related to COVID-19.

Q: Why is your research important?

A: It was important to me because it was personal; my master's degree in public health was obtained over the course of the pandemic, which greatly influenced some topics we discussed in my courses. This research is also important for understanding how the practice of OMM was impeded, changed, and adapted during the COVID-19 pandemic internationally.

Q: How did you gather your data?

A: We sent a survey to members of DO-Touch.NET, our institution's practice-based research network, at two different times, once in October 2020 and again in March 2022, to gather information at the beginning of the pandemic and well into the pandemic. Questions consisted of demographic information, whether COVID-19 positive patients could be treated with OMM based on licensure and local regulations, whether a practitioner had treated COVID-19 positive patients with OMM, how their practice had changed since the beginning of the pandemic, and treatment of patients with symptoms of long COVID.

Q: What results did you find?

A: The pandemic reduced available OMM options for COVID-19 patients worldwide and influenced clinics to adopt policies and measures used to protect patients and staff from contracting the virus. One of the findings most interesting to me was related to clinicians treating COVID-19 patients with OMM. Across North America, South America, Europe, and Asia, we saw a pattern of about 75% of clinicians not treating COVID-19 patients for one reason or another, regardless of geographic location.

Of 206 respondents from both surveys, 19% reported local restrictions or regulations prevented them from treating patients with symptoms of COVID-19 using OMM. Of respondents who could legally use OMM, 34% reported they performed OMM on those with active symptoms. Of the 71 respondents on the second survey, 68% stated they treated patients exhibiting symptoms of long COVID with OMM. The most frequently reported changes in clinical operations during the first six months of the pandemic included adoption of universal precautions, screening, decreased patient volume, patients reporting new symptoms related to infection, and adoption of telehealth services.



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Fighting racial biases in classifying female pelvis shape

Caroline VanSickle, PhD, MA, assistant professor, anatomy, A.T. Still University's Kirksville College of Osteopathic Medicine, and colleagues Kylea L. Liese, PhD, and Julienne N. Rutherford, PhD, from University of Illinois Chicago College of Nursing, published an article, "Textbook Typologies: Challenging the Myth of the Perfect Obstetric Pelvis," in a special issue of *The Anatomical Record*. The article challenges a commonly taught system classifying female pelvic shape and relates it with birth outcomes. It also tackles inaccuracies of the classification system and fights against racial stereotypes it reinforces.

Q: Describe your scholarly work.

A: We reassessed evidence of a commonly taught method of evaluating pelvic adequacy for birth. In the 1930s, obstetricians Drs. W.E. Caldwell and H.C. Moloy developed a way for doctors to predict whether intervention may be necessary during birth. They evaluated pelvic X-rays of patients who required intervention and skeletal remains with unknown birth histories. Based on data, they developed a system to classify female pelvis shapes into four categories, claiming the categories were related to different birth outcomes. We found these claims problematic.

Drs. Caldwell and Moloy didn't study how frequently those same birth canal shapes resulted in births not requiring intervention. Furthermore, they didn't explore other factors contributing to difficult labors, such as nutrition, prenatal care, general health, and fetal size.

By including skeletal remains, they assumed birth canal dimensions do not change within the body, but recent MRI studies show pelvic dimensions change during childbirth and are affected by the position of the individual.

Additionally, we found their work was steeped in racial stereotypes. By including skeletal remains in their study, Drs. Caldwell and Moloy reinforced racist ideas by suggesting birth outcomes varied by race because of biology. Today, scientists know race is not in our biology and racial differences in maternal care affect birth outcomes more than any skeletal differences.

Textbooks still teach the Caldwell-Moloy system but exclude racial assumptions within the system. Our article evaluated and critiqued their evidence, questioning whether the system is necessary.

Q: Why is your project important?

A: This method of evaluating pelvic adequacy for birth is still taught to future obstetricians. Given the poor-quality evidence and racial assumptions built into this method, we are concerned teaching it now may make health professionals believe pelvic shape affects birth outcomes more than it actually does. Because the history of this method is riddled with racial biases, using it reinforces racist ideas about birth. Our project is important because it aims to shed light on this method's racist history and to educate those who use or teach it.

Q: What do you hope to achieve?

A: Our hope is to encourage educators to not teach this typology. Instead, we encourage them to focus on evidence-based factors actually affecting birth outcomes. Additionally, if this method is still taught, we hope the educator introduces students to the assumptions and problematic evidence it's based on. We hope to encourage physicians to be more open-minded and not base their opinion on the Caldwell-Moloy system.

Dr. Caroline VanSickle encourages educators to focus on evidence-based factors affecting birth outcomes, rather than pelvic shape.



Analyzing importance of hands-on dissection labs

Third-year A.T. Still University-Kirksville College of Osteopathic Medicine student Rachel Mehmert, with help from classmate Emma Troyer, biostatistician Mark Brunk-Grady, MS, and anatomy faculty, Associate Professor Jeremy Houser, PhD, and Chair Peter Kondrashov, PhD, completed a study focused on the importance of anatomical dissection and impact of decreased hands-on dissection time on student performance during COVID-19. The study, titled "Effect of COVID-19 Pandemic and Alternative Dissection Groups on Course Delivery and Student Performance in a Cadaver-based Gross Anatomy Course," aims to support continued use of cadaveric dissection as an imperative tool for medical students to effectively learn gross anatomy. Mehmert presented her findings at the American Association for Anatomy's annual meeting, Anatomy Connected 2023.

Q: What is your research about?

A: During COVID-19, the curriculum was modified to alternating dissection groups, so students dissected every 1 of 4 laboratories. This study's purpose was to evaluate what effect decreased hands-on dissection may have had on student performance. During the study, we collected anatomy practical exam and course grades for medical students in the 2022-26 classes. We analyzed practical exams based on whether the dissection objective came from a lab in which students participated in dissection. We used t tests to evaluate relationships between student performance on practical exams and participation in dissection.

Q: What are your findings so far?

A: We concluded maintaining cadaveric dissection opportunities is crucial for student learning and success in anatomical curriculum. Student proficiency improved

in identifying anatomical structures they dissected. It also enhanced their understanding of 3D anatomy, which led to more competency in interpreting medical images. Additionally, alternating dissection groups decreased student contact while still allowing cadaveric dissection experience for students.

Q: Why is your research important?

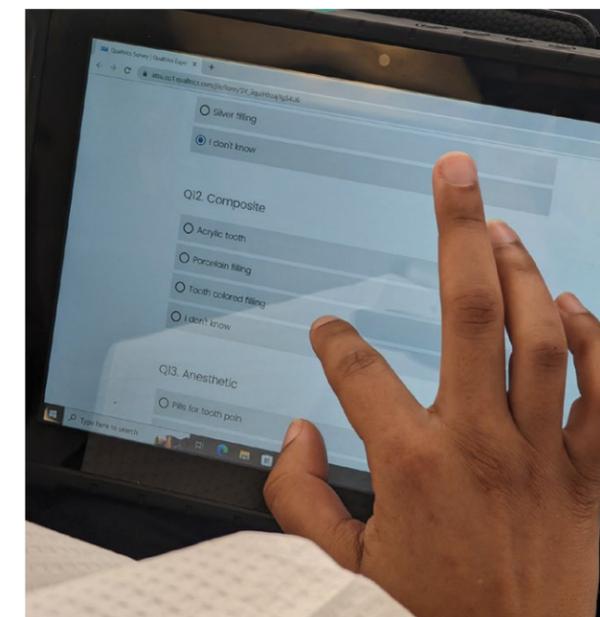
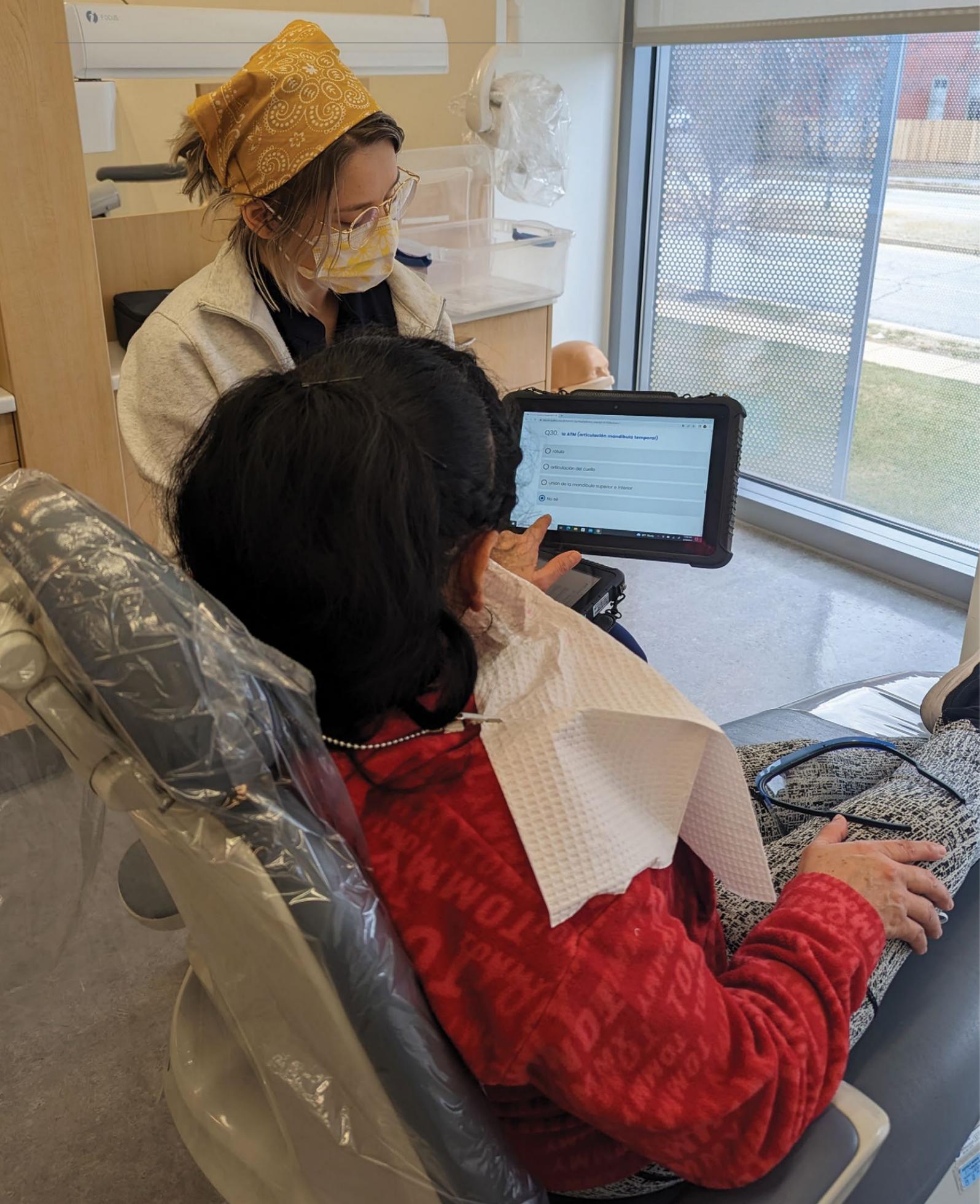
A: Our research is important because, during COVID-19, in-person cadaveric dissection decreased among medical schools. Medical schools began using other platforms, like online labs. We wanted to show the importance of continued use of gross anatomy cadaveric dissection and highlight it as the best method to teach gross anatomy in medical education.



ATSU-KCOM students continue use of cadaveric dissection as part of their curriculum.

Improving patient-provider communication

A.T. Still University-Missouri School of Dentistry & Oral Health graduates Sharon Damaris Murza, DMD, '23, and Svyatoslav Danylyk, DMD, '23, with guidance from faculty advisor Romana Muller, EdD, MSDH, RDH, '22, collaborated on a research project to develop a multilingual oral health literacy assessment tool for use in dental school clinics. The project, which aims to improve oral health literacy while reducing barriers to care, was presented at the 2023 American Dental Education Association Annual Session & Exhibition.



Q: What exactly are you doing in this project?

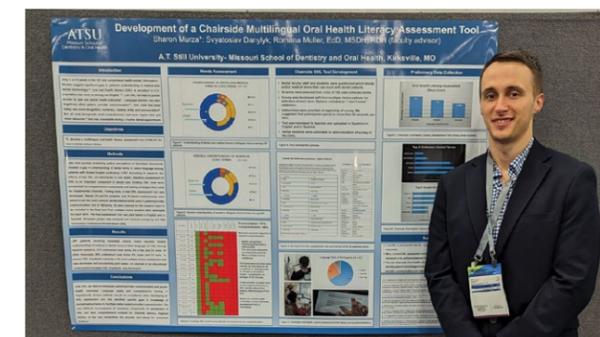
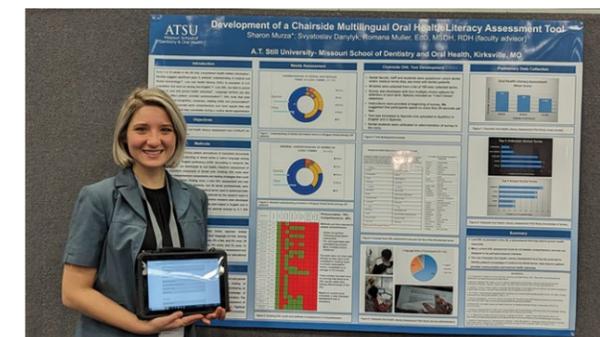
A: The objective of the research project, "Development of a Chairside Multilingual Oral Health Literacy Assessment Tool," was to develop a multilingual oral health literacy assessment tool for use in dental school clinics. This project began by collecting data from surveys evaluating patient perceptions of translated documents at the St. Louis Dental Center. The data indicated a gap in understanding of dental terms in the native language of patients with limited English proficiency. We decided to develop a new oral health literacy assessment tool after analyzing many others, which did not include comprehensive components. Twenty third-year and fourth-year dental students and 20 dental professionals were asked to list the most common dental and medical terms used in patient-provider communication. Of 155 terms, we selected 50 to be included in the final tool. Four multiple-choice answer options were developed for each term. The final assessment tool was pilot tested in English and Spanish with 42 patients at the St. Louis Dental Center.

Q: Why is your research important?

A: We interact with patients daily. Many times, we use vocabulary that is unfamiliar to the average person, so a gap in conversation develops, creating a barrier to care. According to research, the effects of low oral health literacy are detrimental to oral health. Therefore, assessment of oral health literacy is an important component of dental care. This research will not only increase our patients' oral health literacy through the use of translated forms, but it will also reduce appointment times.

Q: What are your findings so far?

A: After surveying 42 patients, the mean scores were as follows: English speakers knew 55% of the words in the survey, Spanish speakers knew 46% of the words, and bilingual English-Spanish speakers knew 38% of the words. The goal was to collect data about the oral health literacy level of our patients and use results to curate future chairside learning tools, ultimately increasing oral health literacy.



Left page and top: Patients complete the oral health assessment on tablets chairside during their dental care appointments.

Drs. Sharon Murza (middle) and Svyatoslav Danylyk (bottom) present their research.

Strengthening and diversifying the dental health workforce

A.T. Still University-Missouri School of Dentistry & Oral Health's (ATSU-MOSDOH) Dwight McLeod, DDS, MS, dean; Poonam Jain, BDS, MS, MPH, vice dean; and Grishondra Branch-Mays, DDS, MS, senior associate dean, are leading the School's first grant from the Health Resources and Services Administration. The grant project, "Addressing Social Determinants of Health and the Oral Health Needs of Vulnerable Populations: A Transformative Approach to Predoctoral Dental Education*," is focused on strengthening and diversifying the dental health workforce to improve the oral health status of underserved communities.

Q: What are the objectives of this project?

A: The five-year project has many components. Its objectives are to strengthen infrastructure, provide education for the dental workforce pipeline, expand partnerships within dental education programs and community-based organizations, and diversify the dental workforce to improve access to care for vulnerable and underserved rural and urban communities. These objectives involve interprofessional education, oral health awareness, research, faculty development and enrichment, and community outreach and engagement. Another area of emphasis is on special needs and medically complex patients by ensuring faculty receive education to treat patients with special needs and to teach students to provide care to these patients. We are recruiting external consultants who are experts in special needs care delivery and will help develop education modules for our students and faculty. These modules will allow our faculty and students to

gain knowledge and skills and increase their comfort level in providing care for patients who are medically complex or have special needs.

Q: Who else is involved in this project?

A: With such a large project, many people are involved. We were able to hire a project manager, Jared Dover, in Sponsored Programs. We have many ATSU-MOSDOH faculty and staff members involved, including Hanan Omar, BDS, PhD, MSc; Akshay Vij, BDS, ACT; and Paul Bigg, DMD. In addition, we recently hired a public health dentist, Olayinka Adekugbe, DMD, MPH, MS, and are filling other leadership roles.

Q: What is an example of an outcome from the project so far?

A: The interprofessional education aspect of the project has been exciting. Earlier this year, we hosted an interprofessional collaborative case with medical students from ATSU-SOMA and physician assistant (PA) students from ATSU-CHC who were on rotation in the area. We divided students into groups, and each group had at least one medical student and one PA student, with the rest being dental students. It takes hard work for collaborative cases to become meaningful experiences for students, so it was rewarding to hear nothing but positive reviews from those students. Seeing how students from different disciplines interacted and learned from each other was fascinating. The medical and PA students' insight and depth of knowledge were amazing, and likewise, those students were impressed by the input from dental students.

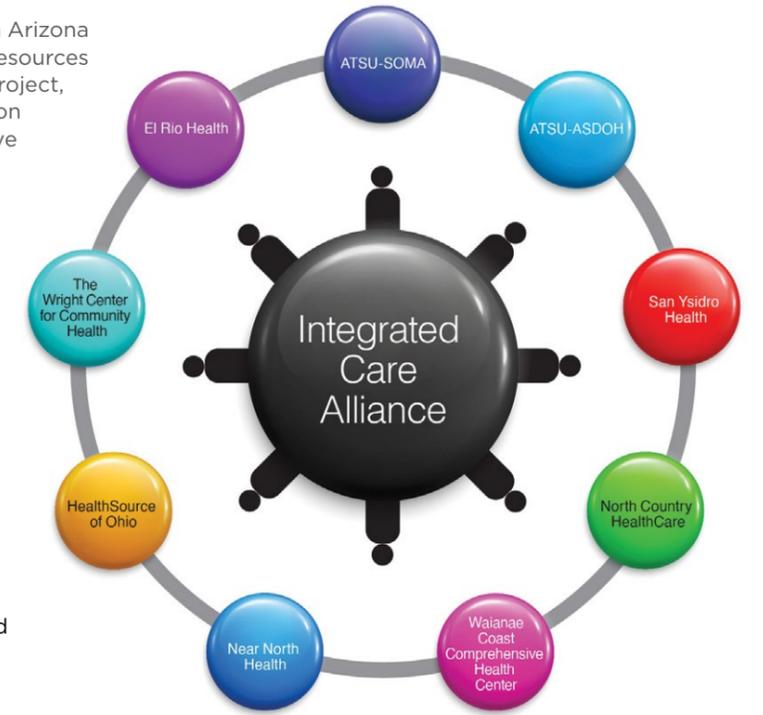
** This project is supported by the Health Resources and Services Administration (HRSA) of the U.S. Department of Health and Human Services (HHS) as part of an award totaling \$1,574,940 with 0% financed with non-governmental sources. The contents are those of the author(s) and do not necessarily represent the official views of, nor an endorsement, by HRSA, HHS, or the U.S. Government. For more information, please visit HRSA.gov.*

Drs. Grishondra Branch-Mays, Dwight McLeod, and Poonam Jain are leading ATSU-MOSDOH's first HRSA grant to improve access to care for vulnerable communities.



Primary care behavioral health integration

A.T. Still University's School of Osteopathic Medicine in Arizona (ATSU-SOMA) was awarded a grant from the Health Resources and Services Administration to support the five-year project, "Pathways to Primary Care Behavioral Health Integration in the Nation's Health Centers: Creating Master Adaptive Learners Where the Need Is Greatest*." Led by Aaron Allgood, DO, associate professor and project director; Lisa Tshuma, DBH, MPAS, MPA, PA-C, DipACLM, associate professor and deputy director, along with seven ATSU-SOMA community health center (CHC) partner education sites and A.T. Still University's Arizona School of Dentistry & Oral Health, the project focuses on developing skills of the current and future health workforce.



Q: What exactly are you doing in this project?

A: There are three major components of this project. First, we developed and implemented the Integration Pathways Program for CHC-based clinical providers. This program enhances capacity at our CHC partner sites in the areas of integrated behavioral health, opioid use disorder/substance use disorder (OUD/SUD), and wellness. The Integration Pathways Program is a one-year education program requiring participants to complete a CHC-based integrated care quality improvement project. The program is multidimensional, and participants are supported through individual coaching, a customized education plan, and structured learning and collaboration with peers across the country through a community of practice network called the ATSU Integrated Care Alliance.

Second, our project is focused on developing and enhancing medical and dental student curricula in our core project areas, which are integrated care, OUD/SUD prevention and treatment, and wellness. Existing curricula in the dental and medical schools have been evaluated and enhanced. Additionally, new core dental and medical elective courses were developed to support student success.

Third, we are focused on evaluating and disseminating project outcomes. Our project team has completed more than 25 invited presentations at national healthcare conferences. We have also supported our CHC-based Integration Pathways participants throughout the quality improvement process, including dissemination at national conferences, such as Beyond Flexner and the Society of Teachers of Family Medicine's annual medical education conference.

Q: What do you hope to achieve?

A: Our aim is to help medical and dental students, faculty, and administrators develop attitudes and skills and acquire the knowledge necessary to effectively address and prevent OUD/SUDs, integrate behavioral health into primary care practice, and improve wellness for the current and future healthcare workforce.

Q: Why is your project important?

A: This project is important because improving healthcare workforce knowledge, attitudes, and skills in integrated behavioral health, OUD/SUD prevention and treatment, and wellness are essential to prevent healthcare workforce burnout and achieve the quadruple aim (advancing population health, improving patient satisfaction, lowering healthcare costs, and enhancing provider/care-team satisfaction).

** This project is supported by the Health Resources and Services Administration (HRSA) of the U.S. Department of Health and Human Services (HHS) as part of an award totaling \$1,998,272 with 0% financed with non-governmental sources. The contents are those of the author(s) and do not necessarily represent the official views of, nor an endorsement, by HRSA, HHS, or the U.S. Government. For more information, please visit HRSA.gov.*

Pathophysiological multitudes in ulcerative colitis

Hyo Jin Ryu is a fourth-year A.T. Still University-School of Osteopathic Medicine in Arizona student based in Hawaii at the Waianae Coast Comprehensive Health Center. Recently named Student Researcher of the Year, she is involved in a multitude of research projects focusing on inflammatory bowel disease, non-small cell lung cancer, neuroimaging, and abuse prevention in methamphetamine addiction. Here, she describes one of her studies in detail.

Q: Describe one of your recent research projects.

A: The ulcerative colitis (UC) study is a National Institutes of Health and Crohn's and Colitis Congress-funded longitudinal clinical research project conducted at the UCLA Center for Neurobiology of Stress and Resilience, UCLA Center for Inflammatory Bowel Diseases, and UCLA Microbiome Core. The project involved more than 100 UC patients in clinical remission and two years of clinical data. We collected data at the beginning of the study for a baseline followed by data collection at regular intervals and during symptomatic flares. This study was designed to improve our understanding of the pathophysiological events in UC during remission and flare. In 2022, we published our first finding: The frequency of symptomatic flares in UC patients is predicted by measures of perceived stress and anxiety and by heightened sympathetic arousal as measured by electrodermal activity, confirming one of the many proposed connections along the brain, gut, and gut microbiome axis in UC pathophysiology.

Q: What exactly are you doing in this project?

A: I was involved in most aspects of the UC study. I administered mini-international neuropsychiatric interviews, performed autonomic nervous system testing, ran participants through MRI machines, and acquired saliva, blood, and stool samples. I also aided in the data management and analyses.

This project took a whole village of passionate physicians, scientists, nurses, and students. I want to express deep gratitude to my research mentors, Drs. Emeran Mayer and Jenny Sauk, for their insight, guidance, and support. I also want to thank all investigators, physicians, and the rest of the research team, including Drs. Jonathan Jacobs, Bruce Naliboff, Venu Lagishetty, and Amir Kalani, Jean Stains, Miriam Dvorsky, MRI technicians, and many others.

Q: Why is your research important?

A: The trillions of microbes residing within us, along the brain-gut axis, regulate our state of well-being. Internal and external factors are in constant communication with one another to create balance

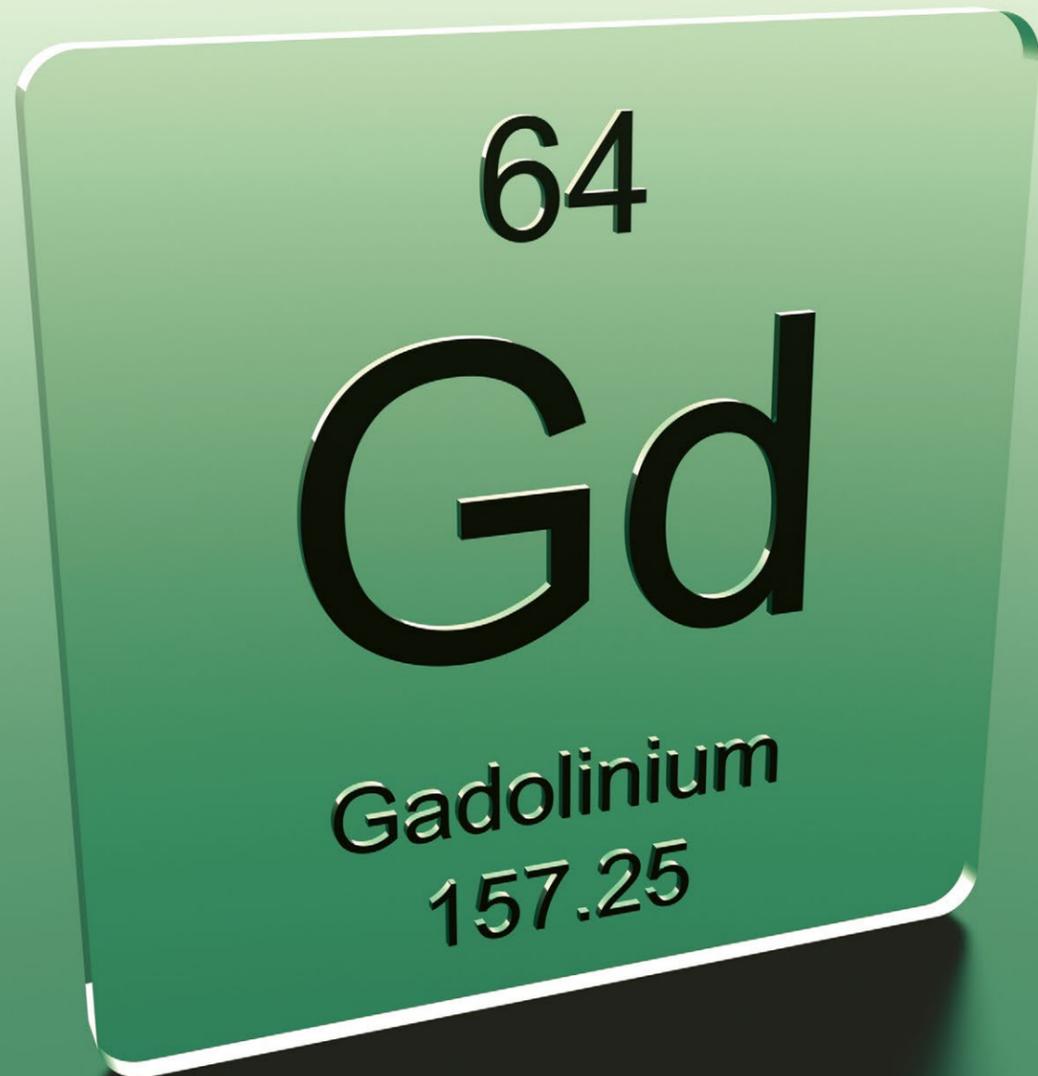
in these physiological networks, which, when perturbed, may manifest in various chronic conditions. With the differences in our biochemistry, diet, life experiences, and so forth, the biopsychosocial model underlying one's health is unique. Therefore, two people may share the same disease, but how it came about or how it presents is almost never identical. To investigate the pathophysiological multitudes of a disease, I take a systems-based approach.

Our research is crucial because it examines the networks of things, or the “-omics,” like the brain connectome, gut microbiome, and genome-wide association studies, and how they interact with each other to render the “whole picture” of what the disease looks like for an individual. We also emphasize and frequently include medical comorbidities, early adverse life events, perceived stress, and other social determinants of health in our analyses. Now, with machine learning in big data research, I hope artificial intelligence technology will expedite building the human connectome and our understanding of how it interacts with our surroundings and shapes our illness/wellness.



Hyo Jin Ryu (second from left) with UCLA colleagues Drs. Jonathan Jacobs, Emeran Mayer, and Jenny Sauk





Innovation through patents

Dr. James Cox and cancer research

By Sami Harris and Katie Hubbard

James Cox, PhD, serves as an associate professor of biochemistry at A.T. Still University's Kirksville College of Osteopathic Medicine (ATSU-KCOM). He earned his bachelor's degree in biochemistry from Iowa State University in 1979 and doctorate in biochemistry from University of South Dakota School of Medicine in 1984. He joined ATSU-KCOM in July 1991, devoting more than 30 years of service to the College.

In addition to being an associate professor, Dr. Cox is a researcher and patent holder. His main research interest is understanding the biochemistry of cancer invasion in the body. Specifically, he studies the molecular biology of inhibitors of proteases, which are proteins helping control the spread of cancer cells.

In 2003, Dr. Cox, along with C. George Carlson, PhD, former associate professor of physiology, received a patent for using gadolinium to block cell movement.

"Gadolinium, a rare earth element, is a first-in-class treatment for metastatic disease," Dr. Cox says. "Currently, there are no cancer treatments that target metastasis specifically. Gadolinium blocks cancer cell migration by blocking calcium channels, and so, the metastatic cells are unable to invade new sites in the body."

Because gadolinium is able to arrest the spread of cancer, Dr. Cox indicated it could give patients more time since metastasis is the primary cause of most cancer deaths. However, gadolinium is only effective in its ionic form, where it precipitates and becomes inactive in normal cell culture media. Typically, gadolinium is used in clinics as an MRI contrast agent in a nonionic form, which prevents precipitation.

Metastasis is responsible for most cancer deaths, but currently, no agents are able to inhibit metastasis. Dr. Cox's research involves studying treatments to prevent or slow metastatic activity.

"We trapped ionic gadolinium in liposomes to prevent its interaction with precipitating ions in normal cell culture media," Dr. Cox says. "After adding liposomes containing gadolinium to cancer cells in culture, we found inhibition of cancer cell migration in normal cell media. This means gadolinium is able to act inside cells as well as outside of the cells it comes in contact with."



Dr. James Cox

Drs. Cox and Carlson also conducted animal studies investigating melanoma tumor growth with and without daily injection of gadolinium-containing liposomes. The results were promising and showed gadolinium delays or blocks melanoma tumor growth. Although they believe delivery of tumor-targeted gadolinium-loaded nanoparticles may be the best way to fully realize gadolinium's potential as an antimetastatic agent, they had to stop their research because of lack of funds for scale-up studies.

In addition to his work with gadolinium, Dr. Cox has been studying cystatins, the most widespread class of cysteine protease inhibitors. His laboratory was the first to demonstrate cystatins were able to inhibit melanoma metastasis, one of the most metastatic of all cancers. He and the medical and biomedical sciences students in his laboratory have shown this inhibitor protein does not act as a protease inhibitor when it inhibits metastasis.

"We found cystatin protein was inhibiting cancer cell migration and inducing some cell death, which resulted in reduced metastasis," Dr. Cox says. "Further, we showed a small, internal cystatin peptide was responsible for the antimetastatic activity."

More recently, Dr. Cox and his students uncovered a different cystatin peptide with an even greater cancer-killing action than the previous peptide. They intend to advance the preclinical utility of these cystatin peptides with the goal of developing a peptide for reducing metastatic spread of cancer cells therapeutically.

In a separate line of work, Dr. Cox's laboratory is investigating alternative types of melanoma cell death. The type of cell death induced by radiation and chemotherapy is mainly apoptosis - a process of programmed cell death.

"The major problem is metastatic cancer cells are highly resistant to undergoing apoptosis," Dr. Cox says. "So, finding nonapoptotic cell death-inducing agents may uncover new vulnerabilities in cancer cells for cancer patients who already have metastatic disease."

ATSU Research, Grants & Scholarly Innovations Annual Impact Report

July 1, 2022-June 30, 2023

3 DEPARTMENTS

Headed by the vice president of research and sponsored programs



3 CENTERS

- Center for Oral Health Research
- Center for Research in Osteopathic Manipulative Medicine
- National Center for Community Health Research

UNIVERSITY-WIDE CERTIFICATIONS

(to June 30, 2023)

5,995

- Protecting human research participants **2,983** total certificates active
- Financial conflict of interest **3,012** total certificates active

RESEARCH EXPENDITURES AT ATSU

\$4,753,868

- Internal and external support of faculty/student research and scholarly activities

REGULATORY COMMITTEE HIGHLIGHTS

- **105** Institutional Review Board applications reviewed on Missouri campus
- **258** Institutional Review Board applications reviewed on Arizona campus
- **11** Hazardous material(s) applications reviewed on Missouri campus
- **2** Hazardous material(s) applications reviewed on Arizona campus
- **16** Institutional Animal Care and Use Committee (IACUC) new and renewal applications reviewed on Missouri campus*

*Required for any use of vertebrate animals (e.g., rodent models) in research. IACUC is charged with evaluating scientific merit, impact for healthcare, and the care of welfare of animals used in research.

Contact Research, Grants & Scholarly Innovations: research@atsu.edu or **660.626.2860**

RESEARCH SUPPORT

July 1, 2022-June 30, 2023

Research project and event management

- **110** scholarly projects with 685 unique faculty, staff, student, and resident researchers assisted
- **5** virtual research events
- **75** virtual posters
- **171** student presenters
- **65** faculty and staff participants
- **4,493** virtual poster views



Biostatistical services

- **84** projects benefiting from data analysis support
- **76** faculty, staff, and residents supported, benefiting an additional 110 ATSU researchers and 121 students
- **335** students receiving skills feedback



Scientific writing, editing, and publication services

- **77** distinct manuscripts edited
- **40** faculty, staff, students, and research affiliates supported, benefiting an additional 123 ATSU co-authors
- **40** submissions to distinct journals



ATSU Research newsletter highlights*

- **238** peer-reviewed journal publications
- **27** published abstracts
- **148** posters and oral presentations
- **137** full-time faculty published

* As self-reported by ATSU faculty, staff, and student researchers.

Contact Research Support:
atsu.edu/research-support

SPONSORED PROGRAMS

July 1, 2022-June 30, 2023



\$5,614,549

received in fiscal year 2023 through 42 grants awards

27 external = \$5,459,600

15 internal = \$154,949



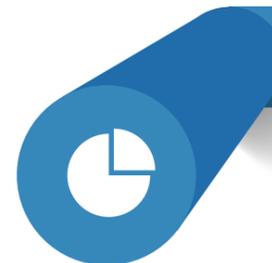
Grant award categories

\$5,399,762 service/educational

\$111,350 clinical science

\$75,761 basic science

\$27,669 educational research



Sponsored Programs quick facts

67% external grant approval rate

37 external applications submitted

38 subawards issued

\$41,055 research reinvestment to principal investigators

\$344,031 indirect costs recovered

63 new and existing external grants managed

13 active multiyear HRSA, CDC, and NIH awards

Contact Sponsored Programs: atsu.edu/sponsored-programs

A.T. STILL RESEARCH INSTITUTE

July 1, 2022-June 30, 2023

3 centers, 55 members

Center for Research in Osteopathic Manipulative Medicine

Center for Oral Health Research

National Center for Community Health Research

66 member presentations

- 7 regional
- 53 national
- 6 international

92 member publications

Educational offerings

- Annual Interdisciplinary Biomedical Research Symposium (hybrid, expanded from regional to national conference)
 - 14th consecutive year
 - 120 attendees
 - 102 posters
 - 9 oral presentations
 - 41 judges
 - 13 residents

DO-Touch.NET

The osteopathic manipulative medicine practice-based research network of practitioners

- 1,005 members
- 25 countries

- DO-Touch.NET
 - Monthly educational and informational sessions
 - 12 virtual programs
 - 244 total attendees
- Research Nexus Webinar Series
 - 14 virtual programs

Contact A.T. Still Research Institute: atsu.edu/atsri

INTERNAL GRANTS July 1, 2022-June 30, 2023

\$154,942

Total amount awarded

- 15 internal grants awarded
- 37 active internal grants underway

Grant award categories

\$35,923 service/educational

\$41,350 clinical science

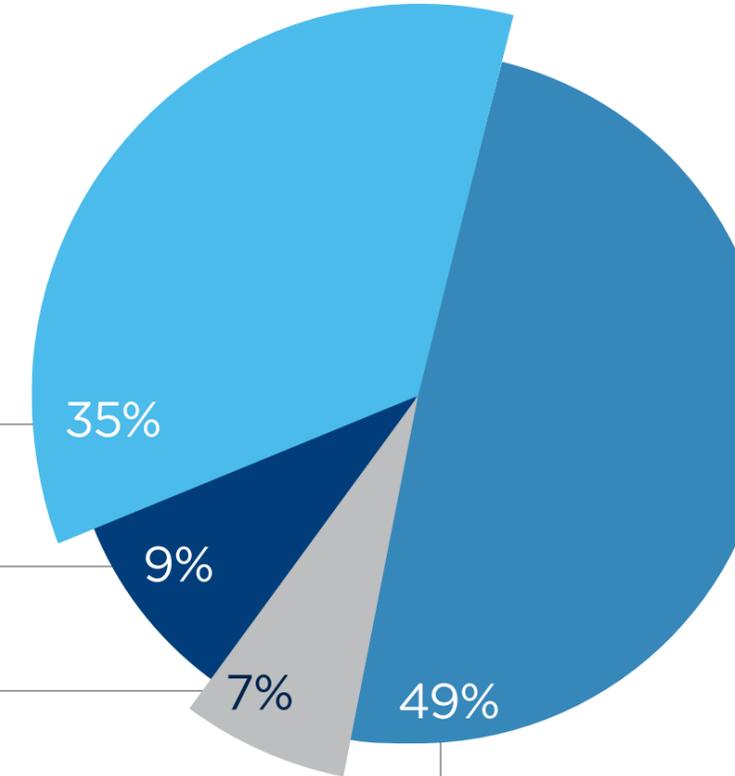
\$50,000 basic science

\$27,669 educational research

Fund/award mechanism

- Underserved Community Scholarly Improvement Grants (\$54,550) 35%
- Highly Flexible Learning Options Using Technology (\$13,390) 9%
- Kirksville Osteopathic Alumni Association (service/educational) (\$11,373) 7%
- Warner/Fermaturo and ATSU Board of Trustees Research Grant (\$75,629) 49%

Applications submitted by fiscal year



Abdulkarim, HH. Publications: Combination scan technique: an innovative approach to diagnosing altered passive eruption, *Journal of Cosmetic Dentistry*. Future drug targets in periodontal personalized medicine: a narrative review, *Journal of Personalized Medicine*. miRNA-146a and miRNA-126 as potential biomarkers in patients with coronary artery disease and generalized periodontitis, *Materials*. Synergistic effect of biphasic calcium phosphate and platelet-rich fibrin attenuate markers for inflammation and osteoclast differentiation by suppressing NF- κ B/MAPK signaling pathway in chronic periodontitis, *Molecules*.

Adams, C. Presentations/abstracts: Mini docs: empowering Waianae coast adolescents to be advocates for their health and their community. Mini Docs: a novel online course delivery to empower student advocates for SARS-CoV-2 safety on O'ahu. The impact of methamphetamine abuse and mental health outreach in high school students of O'ahu, Hawai'i.

Adams, J. Publications: Educational value of ultrasonography used as a diagnostic tool by medical students at a student-run free clinic, *Missouri Medicine*. The myodural bridge of the American alligator (*Alligator mississippiensis*) alters CSF flow, *Journal of Experimental Biology*. Variations in the cerebrospinal fluid dynamics of the American alligator (*Alligator mississippiensis*), *Fluids and Barriers of the CNS*. Presentations/abstracts: Hemarthrosis caused by infrapatellar plica injury.

Adler, K. Publications: Writing self-efficacy and performance among students in an online doctoral program, *International Journal of Innovative Teaching and Learning in Higher Education*.

Ahmad, Z. Publications: Inhibition of Escherichia coli ATP synthase and cell growth by dietary pomegranate phenolics, *International Journal of Biological Macromolecules*. Inhibition of Escherichia coli ATP synthase by dietary ginger phenolics, *International Journal of Biological Macromolecules*. Presentations/abstracts: Inhibition of Escherichia coli ATP synthase by dietary pomegranate phenolics. Inhibition of Escherichia coli ATP synthase by shikonin and alkannin. Potent inhibition of Escherichia coli ATP synthase by pomegranate phenolics: E. coli ATP synthase, enzyme inhibition, punicalagin, and ellagic acid. The compensatory effects of α Val-345 in the catalytic sites of ATP synthase.

Akhtar, S. Publications: Benign tumors in TSC are amenable to treatment by GD3 CAR T cells in mice, *JCI Insight*. Inhibition of Escherichia coli ATP synthase and cell growth by dietary pomegranate phenolics, *International Journal of Biological Macromolecules*. Presentations/abstracts: Inulin protects intestine from LPS induced gut barrier damage. Effects of inulin on intestinal barrier function in a Caco-2

cell monolayer model of intestinal barrier. Endothelial PP2AC prevents endotoxemia-induced acute lung injury by suppressing STAT3 activity. Inulin protects intestinal epithelial cells from LPS-induced inflammation. Vitamin D3 prevents LPS-induced apoptosis and proliferation in IECs.

Alexander, J. Publications: Assessment of the electronic health record skills needed for the health information management student, *Journal of Allied Health*. Attitudes of dental hygiene and nursing students following a simulation activity, *Journal of Dental Hygiene: JDH*. Correlation between Sway Balance and the Modified Balance Error Scoring System, *Journal of Exercise Physiologyonline*. Presentations/abstracts: Are advanced practice providers able to educate patients and effectively manage potential rabies exposures? ATSU Still Standing—fall prevention, community and confidence building: a model for serving the older adult community and providing meaningful student learning experiences.

Allgood, A. Presentations/abstracts: Combating racism in future medical practice: integration of inclusive dermatology toolkit into undergraduate medical education.

Allinson, RD. Publications: Effectiveness of an interactive training software on the accuracy of inferior alveolar nerve block (IANB) injection at a preclinical level (pilot study), *Journal of Dental Education*.

Amini-Rad, S. Presentations/abstracts: The effects of the COVID-19 pandemic on the practice of OMM.

Anderson, BE. Publications: The critical need for advanced training in electronic records use: implications for clinical practice, education, and the advancement of athletic training, *Journal of Athletic Training*.

Anderson, E. Publications: COVID-19 and communities of color: understanding the impact of racism on public health, Nevada *Journal of Public Health*. Stress and coping among American Indian/Alaska Natives in the age of COVID-19, *American Indian Culture and Research Journal*. Presentations/abstracts: Assessing the impact of team-based care on blood pressure control in patients with hypertension. COVID-19: stress and coping in communities of color. Exploring clinician and staff knowledge, attitudes and practices related to childhood immunizations. Exploring provider stress and the relationship to recruitment and retention in a community health center system. Exploring the impact of EHR optimization on clinician well-being. Factors influencing retention of primary care providers in rural Northern Arizona. Implementing a blood pressure measurement protocol to improve the diagnosis and treatment of hypertension. Leading and teaching in the nation's health centers to address health disparities: the PCTE fellowship. Refining the blood pressure measurement protocol to improve the diagnosis and treatment of hypertension. Resilience in research: embracing novel approaches to conducting research in the age of COVID-19. Stress and coping with remote schooling during COVID-19. Stress and coping: African Americans during COVID-19. Supporting student learning and transformational change in health care. The Primary Care Transformation Executive

(PCTE) fellowship: fostering interprofessional education, practice, and research for primary care clinicians. Women's perceived stressors and coping during COVID-19.

Andrews, L. Presentations/abstracts: Promoting field work in the Arizona community panel.

Appikatla, S. Presentations/abstracts: Assessing the impact of team-based care on blood pressure control in patients with hypertension. Exploring clinician and staff knowledge, attitudes and practices related to childhood immunizations. Exploring provider stress and the relationship to recruitment and retention in a community health center system. Exploring the impact of EHR optimization on clinician well-being. Factors influencing retention of primary care providers in rural Northern Arizona. Implementing a blood pressure measurement protocol to improve the diagnosis and treatment of hypertension. Leading and teaching in the nation's health centers to address health disparities: the PCTE fellowship. Prioritizing preventative health in older adults residing in long term care facilities through vaccination. Refining the blood pressure measurement protocol to improve the diagnosis and treatment of hypertension. Supporting student learning and transformational change in health care. The Primary Care Transformation Executive (PCTE) fellowship: fostering interprofessional education, practice, and research for primary care clinicians.

Arbizu, M. Presentations/abstracts: Social mission and health equity from classroom to clinic to practice.

Archer, L. Publications: Web-based standardized patient encounters for preclinical dental students during COVID-19 pandemic, *Journal of Dental Education*. Presentations/abstracts: Development of dental interactive case-based learning (DICBL) model.

Asaro, R. Presentations/abstracts: Use of the Nutrition and Health Awareness (NHA) program in improving health knowledge and attitudes among New York City children. Why patients do not follow through with behavioral health referrals: a quality improvement project on patient-perceived barriers in a community health care setting.

Aubrey, P. Presentations/abstracts: Impact of removable partial dentures on periodontal health of patients.

Ayars, CL. Publications: Evaluation of ethics curricula and faculty in accredited undergraduate radiologic technology programs, *Radiologic Technology*. Investigation of the cultural competence of dental hygienists practicing in a region of low diversity, *Journal of Dental Hygiene: JDH*. Obesity health education integrated into current work roles of health education specialists, *American Journal of Health Studies*. Predictors of stress in first-generation college students, *Journal of Student Affairs Research and Practice*. Retention of sterile compounding knowledge among pharmacy technicians, *Journal of Pharmacy Technology*. Presentations/abstracts: Effects of firefighter shift schedules on body composition and fitness.

Bachus, V. Publications: Improving workforce experiences at United States federally qualified health centers: exploring the perceived

impact of generational diversity on employee engagement, *Patient Experience Journal*. Presentations/abstracts: The effect of a multigenerational workforce on employee engagement in FQHCs?

Baer, RW. Presentations/abstracts: Characterization of polarized macrophage-melanoma cell interactions. Does macrophage stimulation by CCL5 alter melanoma migratory behavior? Doramectin induces apoptosis in B16 melanoma cells. Doramectin induces apoptosis in murine melanoma B16F10 cells. M0 and M1 macrophage phagocytosis of melanoma and Jurkat cells. Silibinin protects against staurosporine-induced apoptosis in malignant melanoma B16F10 cells.

Barragan, B. Presentations/abstracts: Do you see your bias? An accent perception study. Emotional verbal fluency across two languages in healthy bilingual adults. Short-term memory, verbal fluency, and receptive vocabulary in bilingual healthy adults. Sixty-seconds go! Exploring semantic verbal fluency among bilinguals. The remarkable role of the motor cortex in L2 speech perception.

Batista, GR. Publications: Effectiveness of an interactive training software on the accuracy of inferior alveolar nerve block (IANB) injection at a preclinical level (pilot study), *Journal of Dental Education*. Surface smoothness of resin composites after polishing – a systematic review and network meta-analysis of in vitro studies, *European Journal of Oral Sciences*. The effects of polishing techniques on surface roughness and gloss of different composites, *General Dentistry*. Presentations/abstracts: Curriculum integration through utilization of the "patient box." Development of dental interactive case-based learning (DICBL) model. Lessons learned from online learning during COVID-19. Profilometric analysis of direct and indirect composites after brushing simulation. Students' perception towards phased approach to resuming education during the COVID-19 pandemic. Videos in dental education.

Bay, RC. Publications: A CBCT evaluation of midpalatal bone density in various skeletal patterns, *Sensors*. A descriptive and comparative analysis of injuries reported in USA Cycling-sanctioned competitive road cycling events, *Injury Epidemiology*. A retrospective CBCT study of the relationship between mandibular symphysis bone density and mandibular growth direction, *Journal of Clinical Pediatric Dentistry*. An examination of perceived pressure from stakeholders on concussion reporting intentions and behavior in ice hockey athletes, *Journal of Head Trauma Rehabilitation*. Applying the Value Transformation Framework in federally qualified health centers to increase clinical measures performance, *Journal for Healthcare Quality*. Association between hyperoxia and mortality in severely burned patients, *Burns*. C-reactive protein levels associated with COVID-19 outcomes in the United States, *Journal of Osteopathic Medicine*. Characteristics of athletic training students' patient encounters during immersive and nonimmersive clinical experiences: a report from the Association for Athletic Training Education Research Network, *Athletic Training Education Journal*. Characteristics of patient encounters for athletic training students during clinical education: a report from the Association for Athletic Training Education Research Network, *Journal of Athletic Training*. Concurrent validity of the

Concussion Quality of Life-Youth patient-report outcome measure (version 1), *Brain Injury*. Core competency-related professional behaviors during patient encounters: a report from the Association for Athletic Training Education Research Network, *Journal of Athletic Training*. Cortical bone thickness and bone density effects on miniscrew success rates: a systematic review and meta-analysis, *Orthodontics and Craniofacial Research*. Determining near point of convergence: exploring a component of the vestibular/ocular motor screen comparing varied target sizes, *International Journal of Sports Physical Therapy*. Distalization of maxillary molars using temporary skeletal anchorage devices: a systematic review and meta-analysis, *Orthodontics and Craniofacial Research*. Epidemiology of patients with dance-related injuries presenting to emergency departments in the United States, 2014-2018, *Sports Health*. Establishing reliability of a reaction time testing battery in high school athletes, *Athletic Training and Sports Health Care*. Evaluating multiple domains of health in high school athletes with sport-related concussion, *Journal of Sport Rehabilitation*. Frequency of student resource use and academic performance in preclerkship education: a survey study, *Medical Science Educator*. Impact of COVID-19-related care disruptions on blood pressure management and control in community health centers, *BMC Public Health*. Interpreting patient-rated outcome measures in adolescent patients following concussion, *Brain Injury*. Key elements of the critical care work environment associated with burnout and compassion satisfaction, *American Journal of Critical Care*. Nurses' experiences of "being swamped" in the clinical setting and association with adherence to AWHONN nurse staffing guidelines, *MCN The American Journal of Maternal/Child Nursing*. Patient and staff satisfaction and experience while transforming health center systems, *Risk Management and Healthcare Policy*. Preliminary study: evaluating the reliability of CBCT images for tongue space measurements in the field of orthodontics, *Oral Radiology*. Risk factors for plantar fasciitis in physically active individuals: a systematic review and meta-analysis, *Sports Health*. Self-motivation and self-direction in team-based and case-based learning, *Journal of Dental Education*. SMART oncology nursing: literacy, goals, coaching, and empowerment, *Oncology Nursing Forum*. The effectiveness of virtual interviews for postgraduate orthodontic residencies in North America, *Journal of the World Federation of Orthodontists*. The influence of timing of reporting and clinic presentation on concussion recovery outcomes: a systematic review and meta-analysis, *Sports Medicine*. The randomized, controlled ATLANTIS trial of aquatic therapy for chronic venous insufficiency, *Journal of Vascular Surgery Venous and Lymphatic Disorders*. The Value Transformation Framework: applied to diabetes control in federally qualified health centers, *Journal of Multidisciplinary Healthcare*. Trends in the choice of a clinician for orthodontic treatment in the United States, *American Journal of Orthodontics & Dentofacial Orthopedics*. Types and prevalence of adverse skin reactions associated with prolonged N95 and simple mask usage during the COVID-19 pandemic, *Journal of the European Academy of Dermatology & Venereology*. Presentations/abstracts: Athletic trainers' perceptions of and experience with social determinants of health in the collegiate and university setting. Athletic trainers' perceptions of and experiences with social determinants of health

in the secondary school setting. Athletic trainers' perceptions of social determinants of health. Athletic training student application of health information technology based on their role during patient encounters: a report from the AATE Research Network. Athletic training student core competency professional behavior implementation between immersive and non-immersive experiences: a report from the AATE Research Network. Concurrent validity of the Concussion Quality of Life-Youth patient-reported outcome measure (version 1). Epidemiology of patients presenting to emergency departments in the United States with football-related injuries, 2006-2019. Evaluating multiple domains of health in high school athletes with sport-related concussion. Influence of preceptor/student gender bias on the implementation of core competency professional behaviors during clinical experience: a report from the AATE Research Network. Test-retest reliability and concurrent validity of the Concussion Quality of Life-Youth patient-report outcome measure. The impact of treatment characteristics on self-reported function at the time of return to play following an ankle sprain injury: a report from the Athletic Training Practice-Based Research Network. The influence of timing of reporting and clinic presentation on concussion recovery outcomes: a systematic review and meta-analysis. The relationships between early sports specialization, overuse injuries, and health-related quality of life in throwing athletes. Upper extremity injury history impacts current health related quality of life in collegiate baseball and softball athletes.

Bereda, C. Presentations/abstracts: Addressing food insecurity by increasing awareness of local resources in Centreville, Illinois. Blood pressure screening of underserved individuals in southern Illinois.

Bernard, K. Publications: Comparing the effectiveness of virtual and in-person delivery of mindfulness-based skills within healthcare curriculums, *Medical Science Educator*. Wellness in physician assistant education: exploring mindfulness, well-being, and stress, *The Journal of Physician Assistant Education Association*.

Bernstein, J. Publications: A community of practice in dental education: a phenomenon of newcomers becoming oldtimers, *Journal of Dental Education*. A comparative review of nutrition education intervention duration and impact on reduction of prediabetes or Type 2 diabetes mellitus among adults aged 45 years or older, *Health & Social Care in the Community*. A narrative review of ethnic minority studies for faith-based health promotion interventions with special reference to the contemporary Christian nurse, *Journal of Religion and Health*. Association between faculty and student self-efficacy and attitudes toward evidence-informed practice, *Journal of Higher Education Theory and Practice*. Female genital mutilation and cutting in the Arab League and diaspora: a systematic review of preventive interventions, *Tropical Medicine & International Health*. Presentations/abstracts: Associations between faculty and student self-efficacy and attitudes toward evidence-informed practice. The effect of wellness initiatives on well-being and burnout symptoms in surgical residents.

Blessing, D. Publications: A pilot elective course to enhance geriatric medical education using cognitive stimulation therapy, *Gerontology & Geriatrics Education*.

Bordenave, E. Publications: Correlation between Sway Balance and the Modified Balance Error Scoring System, *Journal of Exercise Physiologyonline*. Presentations/abstracts: ATSU Still Standing—fall prevention, community and confidence building: a model for serving the older adult community and providing meaningful student learning experiences.

Bordenave, L. Publications: How people with lumbar spinal stenosis make decisions about treatment: a qualitative study using the Health Belief Model, *Musculoskeletal Science and Practice*. Volunteer leadership in the American Physical Therapy Association: a phenomenological study of early career physical therapists, *Physical Therapy*.

Brady, J. Presentations/abstracts: Efficacy of ClōSYS® anticavity toothpaste and GentleMINT rinse regimen on plaque, gingival inflammation and bleeding upon probing.

Branch-Mays, G. Publications: Junior faculty perspectives on the academic environment: a call for development and onboarding, *Journal of Dental Education*. Presentations/abstracts: Students' perception towards phased approach to resuming education during the COVID-19 pandemic.

Brechue, WF. Publications: Prediction of anaerobic power from standing long jump in NCAA Division IA football players, *Journal of Strength and Conditioning Research*. Presentations/abstracts: Anthropometric dimensions to predict body weight in college-aged women. Anthropometric prediction of grip strength in college men and women. BMD and BMC in college women basketball players and swimmers. Carbonic anhydrase inhibition does not affect fatigue or force generation. Comparison of upper- and lower-body power tests in college female athletes. Regional body composition differences among college football players. Relationship of anthropometry and barbell kinematics in weightlifters. Sex and resistance training mode affect strength gain in men and women. Sprint and acceleration profiles of adolescent male and female athletes. Work capacity and estimation of 1RM bench press in athletes.

Breitenbach, E. Publications: Writing self-efficacy and performance among students in an online doctoral program, *International Journal of Innovative Teaching and Learning in Higher Education*.

Bright, H. Presentations/abstracts: The top-cited articles in osteopathic medical education: a bibliometric analysis.

Bruning, G. Presentations/abstracts: Supraclavicular lymphadenitis in a child with COVID-19 infection.

Bryant, V. Publications: Harry Potter and the osteopathic medical school: creating a Harry Potter-themed day as a high-yield review for final exams, *Medical Science Educator*. Harry Potter and the osteopathic medical school part 2: creating a virtual Harry Potter-themed day as a high-yield review for final examinations, *Medical Science Educator*.

Burch, AL. Publications: Higher education leaders' framing of organizational decisions

during COVID-19, *Journal of Allied Health*. Presentations/abstracts: Listening and learning through COVID-19: lived experience in the US of an academic dean in the health professions.

Byrnes, TR. Publications: Advocacy for change: an osteopathic review of traumatic brain injury among combat veterans, *Cureus*.

Campbell, A. Publications: Frequency of student resource use and academic performance in preclerkship education: a survey study, *Medical Science Educator*.

Caputo, A. Presentations/abstracts: Nasotracheal intubation vs nasopharyngeal (open) airway: understating dental provider preferences.

Carroll, J. Presentations/abstracts: Printing in curriculum and research: create, engage, and empower—seven years later! The biomechanics of pedal anchoring in *Alligator mississippiensis*.

Centeno Vazquez, M. Presentations/abstracts: Leading graduate program innovation: creating educational connections for a diverse student experience.

Chaffin, J. Publications: Oral health in America: implications for dental practice, *Journal of the American Dental Association*.

Chamberlain, NR. Publications: Detection and partial characterization of extracellular inducers of persistence in *Staphylococcus epidermidis* and *Staphylococcus aureus*, *Journal of Medical Microbiology*. Presentations/abstracts: Curricular changes to increase quality of healthcare for individuals with intellectual and developmental disabilities: combating health disparities by increasing inclusion in medical education. Identification of an extracellular inhibitor of persistence in *S. aureus*.

Chang, Y. Publications: Regulation of bFGF-induced effects on rat aortic smooth muscle cells by β 3-adrenergic receptors, *Current Research in Pharmacology and Drug Discovery*. Presentations/abstracts: Interactions between β 3-adrenergic receptors and bFGF-induced effects in rat aortic smooth muscle cells. Regulation of bFGF-induced effects on rat aortic smooth muscle cells by β 3-ARs. Regulation of PDGF-induced effects on rat aortic smooth muscle cells by β 3-ARs. Role of β 3-adrenergic receptors (β 3-ARs) in vascular injury-induced neointima formation.

Chang, KJ. Presentations/abstracts: Effect of d-PTFE membrane surface on soft and hard tissue healing in ridge preservation: a case report. Xenograft morphology impact on hard and soft tissue growth in site preservation: a case report.

Chartrand, H. Presentations/abstracts: AHEC Scholars: addressing health workforce shortages. Building the interprofessional education case through information evidence and outcomes. Early clinical experience change medical students' knowledge/attitude.

Chu, S. Presentations/abstracts: Implementing the CRAFFT at family health centers (FHCs) at NYU Langone.

Cleaver, D. Presentations/abstracts: A rare presentation of self-resolving purple fingers. Adalimumab inducing pyoderma gangrenosum. Foreign body formation due to transepithelial elimination of hernia mesh. Interstitial granulomatous dermatitis as a paraneoplastic syndrome: a case. Lymphomatoid papulosis or is it? Nodular fasciitis of the finger: an unexpected location. Porocarcinoma. Primary cutaneous anaplastic large cell lymphoma in an adolescent female. What a headache: ertenumab induced urticarial drug eruption.

Cleaver, J. Presentations/abstracts: Foreign body formation due to transepithelial elimination of hernia mesh. Nodular fasciitis of the finger: an unexpected location. Sweet syndrome secondary to azathioprine use for myasthenia gravis.

Cleaver, L. Publications: Multicentre selective lymphadenectomy trial 1: key primary data remain unavailable, *British Journal of Dermatology*. Presentations/abstracts: Adalimumab inducing pyoderma gangrenosum. Foreign body formation due to transepithelial elimination of hernia mesh. Nodular fasciitis of the finger: an unexpected location. Primary cutaneous anaplastic large cell lymphoma in an adolescent female. What a headache: ertenumab induced urticarial drug eruption.

Cleaver, N. Presentations/abstracts: Interstitial granulomatous dermatitis as a paraneoplastic syndrome: a case. Porocarcinoma.

Clegg, R. Presentations/abstracts: Understanding the perceived impact of executive leadership competencies on VBP organizational performance of US acute care hospitals.

Cohen, J. Publications: Intraoral scanning with rubber dam isolation in place for fabrication of a chairside computer-assisted design and computer-assisted manufacture ceramic restoration, *The Journal of Contemporary Dental Practice*. Presentations/abstracts: High-resolution ultrasound imaging for temporomandibular joint disorder assessment.

Conley, G. Publications: A mixed-methods study of the effectiveness and perceptions of a course design institute for health and science educators, *BMC Medical Education*. Creating accessible and inclusive online learning: moving beyond compliance and broadening the discussion, *Quarterly Review of Distance Education*. Presentations/abstracts: Bridging the health disparities divide: measuring cultural proficiency development in graduate health science students. Reading fatigue: the cost of varying page lengths in e-textbooks on student self-regulation skills. Scenario-based training research project: a self-paced approach to offer professional development to clinical educators. Strategies for implementing team-based learning into a synchronous online graduate anatomy course. Teaching essential course design skills: investigation of a professional development opportunity for health science educators.

Corrick, J. Presentations/abstracts: Exploring the effects of e-health on rural population mental health.

Please note: Peer-reviewed journal publications, presentations, and abstracts are included as reported in the Fall 2020 through Supplement 2022 *ATSU Research* newsletters, prepared by Research Support. Individuals listed were full-time and part-time ATSU faculty and staff members at the time publications, presentations, or abstracts were self-reported to Research Support.

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FACULTY and STAFF SCHOLARLY ACTIVITY (September 2020-December 2022)

Cortes, J. Presentations/abstracts: Exploring clinician and staff knowledge, attitudes and practices related to childhood immunizations.

Cottam, WW. Presentations/abstracts: IPE from the classroom to practice. Social mission and health equity from classroom to clinic to practice.

Coty, ME. Presentations/abstracts: Preparing incoming medical students for success using online prematriculation coursework.

Cox, JL. Publications: Autophagy in melanoma: a brief note, *Journal of Carcinogenesis & Mutagenesis*. Presentations/abstracts: Characterization of polarized macrophage-melanoma cell interactions. Doramectin induces apoptosis in B16 melanoma cells. Role of MTA3 on growth, migration, and invasion in B16 melanoma cells. Doramectin induces apoptosis in murine melanoma B16F10 cells. Effect of shikonin treatment on B16 melanoma cells. Silibinin protects against staurosporine-induced apoptosis in malignant melanoma B16F10 cells. Silibinin protects melanoma cells from staurosporine-induced cell death.

Cramberg, M. Publications: Fibrocartilaginous metaplasia and neovascularization of the anterior cruciate ligament in patients with osteoarthritis, *Clinical Anatomy*. Morphometrics of the spinal cord and surrounding structures in *Alligator mississippiensis*, *Biology*. Slithering CSF: cerebrospinal fluid dynamics in the stationary and moving viper boa, *Candoia aspera*, *Biology*. The functional morphology of the postpulmonary septum of the American alligator (*Alligator mississippiensis*), *The Anatomical Record*. The morphology of the suboccipital region in snakes, and the anatomical and functional diversity of the myodural bridge, *Journal of Morphology*. The orbitaauricular chord of Alligator: the unusual functional linkage between the earflap and eyelid of Crocodylians, *Journal of Anatomy*. Treadmill locomotion in the American alligator (*Alligator mississippiensis*) produces dynamic changes in intracranial cerebrospinal fluid pressure, *Scientific Reports*. Presentations/abstracts: Cerebrospinal fluid pressure is significantly influenced by movement. Immunohistochemical analysis of MTHFR in rat and human eyes. Pedal anchoring in the American alligator (*Alligator mississippiensis*). The biomechanics of pedal anchoring in *Alligator mississippiensis*. The influence of venous blood on lumbar cerebrospinal fluid pressure.

Creech, J. Presentations/abstracts: Correlation between BMI and caries risk. Emergency preparedness in the dental office survey: report on the use of the Ten Minutes Saves a Life! app.

Crivello, BJ. Publications: Community partnerships within a novel dental school urgent care center: student perceptions, *Journal of Dental Education*. Impact of experiential learning on dental students' training in nitrous oxide inhalation sedation, *Journal of Dental Education*. Mentorship availability and needs for junior faculty members at the United States and Australian dental schools, *European Journal of Dental Education*.

Crockett, R. Presentations/abstracts: Analysis of interproximal contact loss between fixed implant crowns and adjacent teeth. Interproximal contact loss between implant and adjacent tooth.

Danielsen, RD. Presentations/abstracts: Serving those who serve: educating the current and future health care workforce on providing care to America's veteran population.

Davis, JM. Publications: Addressing oral health barriers to care in head and neck cancer patients using a novel collaborative care approach, *Clinical Case Reports*. Community partnerships within a novel dental school urgent care center: student perceptions, *Journal of Dental Education*. Dental students' knowledge and attitudes about human papillomavirus prevention, *Vaccines*. Impact of experiential learning on dental students' training in nitrous oxide inhalation sedation, *Journal of Dental Education*. Real-time collaborative question-making activity to enhance students' knowledge of evidence-based dentistry, *Journal of Dental Education*. Presentations/abstracts: A comparison of recommendations from a computer-based decision system and tobacco treatment specialists: insights and lessons learned. A new and innovative model between community health and an academic dental institution: addressing oral health disparities of US veterans through community and academic partnerships.

DeFontes, D. Presentations/abstracts: Hygiene and sanitation needs of people experiencing homelessness in Portland, OR. Provider preferences regarding the benefits and challenges of utilizing telemedicine.

Degenhardt, B. Presentations/abstracts: Advancing the measurement of rib cage excursion in females. Assessment of the safety of osteopathic manipulative treatment based on patient report: an observational study conducted by DO-Touch.NET. Comparison of outcomes of diagnostic palpation training delivery methods. Correlation of surface topography volume and spirometry tidal volume. Diagnostic palpatory force asymmetries persist throughout OMM training. Does experience affect diagnostic palpatory force? Effect of objective training on asymmetry assessments of the pelvis. Effects of osteopathic manual treatment and acupuncture on TBI symptoms. Examiners' perception does not agree with objective stiffness measures during the ASIS compression test. Improvements in volume measurements with the DIERS formetric 4D. Objective force palpation feedback using force pad technology. Osteopathic manipulative treatment techniques nomenclature: is there a need to improve consistency. Participating in the scientific process, a clinician's role. Patient-reported outcomes following a single session of osteopathic manipulative treatment: a prospective, observational study conducted by DO-Touch.NET. Practice makes improvement: training accurate force delivery to spine models. Reducing diagnostic palpatory force variability after 8-weeks of training with objective feedback. Standardizing methodology for headache research in manipulative therapy. Surface topography to measure respiratory mechanics:

a pilot study. The effects of the COVID-19 pandemic on the practice of OMM.

Delbridge, M. Presentations/abstracts: Orthotic fabrication for the general practitioner.

DeLeeuw, J. Presentations/abstracts: Risk stratifying COVID-19 patients before and after creating a lab order set.

DeVore Kochanoff, K. Presentations/abstracts: Colorectal cancer screening compliance in Community Health Centers of the Central Coast (CHCCC). Growing our own at A.T. Still University: community empowerment.

Diamant, RB. Publications: Examining the educational and professional learning contexts where occupational therapy practitioners gained competencies for intraprofessional collaboration, *Journal of Occupational Therapy Education*.

DiBaise, M. Publications: A case of multifocal papillary carcinoma and thyrotoxicosis: hypokalemic periodic paralysis, *Journal of the American Academy of Physician Assistants*. Diagnosing and managing patients with rheumatoid arthritis, *Journal of the American Academy of Physician Assistants*. Presentations/abstracts: Ensuring an equitable admissions process: using non-cognitive variables.

Dishman, L. Publications: Conducting a doctoral qualitative study during a pandemic: pivoting to online data collections and data analyses, *SAGE Research Methods Cases: Medicine and Health*. Employee turnover: why medical practices lose good employees, *The Journal of Medical Practice Management*. Improving workforce experiences at United States federally qualified health centers: exploring the perceived impact of generational diversity on employee engagement, *Patient Experience Journal*. The challenge of employee retention in medical practices across the United States: an exploratory investigation into the relationship between operational succession planning and employee turnover, *Advances in Health Care Management*. Presentations/abstracts: A national qualitative study regarding healthcare leadership competencies: implications and recommendations. A systematic literature review of the relationship between resilience and burnout among healthcare executives. A systematic literature review of the relationship between using electronic health records and employee satisfaction. A systematic literature review: relationships between US hospitals' executive leadership competencies and organizational VBP performance. An examination of resilience and burnout in US senior healthcare executives during the COVID-19 pandemic. Connecting the classroom to the field. Creative and innovative teaching methods and tools. Exploring the effects of a syringe services program (SSP) in a Native American community. Exploring the impact of patient education and medication adherence on the health outcomes of adult diabetic patients in large urban areas of the US. How does formal succession planning affect leadership sustainability and organizational performance of United States hospitals? How does multi-generational employee engagement affect United States

federally qualified health centers' financial performance? How to teach online health administration courses effectively? Leadership competencies and patient experience: a literature review. Losing our staff: a qualitative analysis of the medical practice perspectives on operational succession planning and employee turnover. Planning for the future: a cross-sectional exploration of the relationship between operational succession planning and employee turnover in medical practices. Promoting equity in learning: inclusion in the classrooms across healthcare management programs. Quality of patient care as an antecedent of patient satisfaction: a mixed-method study about inpatient acute-care hospitals across the United States. The effect of a multigenerational workforce on employee engagement in FQHCs? Understanding operational succession planning and employee turnover of healthcare organizations. Understanding the perceived impact of executive leadership competencies on VBP organizational performance of US acute care hospitals. What senior healthcare leadership competencies matter most to affect positive patient experiences in United States inpatient acute care hospitals?

Dixon, B. Presentations/abstracts: FDM and OMT as an adjunct for acute sports-related ankle sprain.

Dixon, C. Presentations/abstracts: Pour some sugar on me: an analysis of diabetes telehealth follow-ups. Twists, turns, and blockages to colorectal screening follow-up.

Dochterman, M. Presentations/abstracts: Surface topography to measure respiratory mechanics: a pilot study.

Doublestein, DA. Publications: Effects of manual lymphatic drainage techniques on conditions affecting the musculoskeletal system: a systematic review, *Orthopaedic Physical Therapy Practice*. Faculty survey on the status of lymphology education in professional doctor of physical therapy programs, *Rehabilitation Oncology*. The lived experience of primary lymphoedema: a phenomenological study of personage and caregiver, *Journal of Lymphoedema*. Use of outcome measures by certified lymphedema therapists with breast cancer survivors with breast cancer-related lymphedema, *Rehabilitation Oncology*. Presentations/abstracts: Use of outcome measures by lymphedema therapists.

Drummond, L. Presentations/abstracts: Use of the Nutrition and Health Awareness (NHA) program in improving health knowledge and attitudes among New York City children.

Duffy, R. Presentations/abstracts: Salivary pH and buffering change following use of pHighter Mint™.

Duong, ML. Publications: Clear aligner treatment education in dental schools in the United States and Canada, *Journal of Clinical Orthodontics*. Oral health care practice patterns for geriatric patients: an American Dental Association Clinical Evaluators Panel survey, *Journal of the American Dental Association*. The current status of orthodontic education in US pediatric dental residencies, *Journal of Dental Education*. Presentations/abstracts: Dental student attitudes towards gaming for evidence-based dentistry. Sedation dentistry in outpatient clinical settings. The

use of social-emotional learning tool in special care dental education.

El-Gendy, T. Publications: Color stability of fully- and pre-crystalized chair-side CAD-CAM lithium disilicate restorations after required and additional sintering processes, *Journal of Advanced Prosthodontics*. Presentations/abstracts: Analysis of interproximal contact loss between fixed implant crowns and adjacent teeth. Color stability of novel lithium disilicate CAD/CAM ceramics after additional sintering processes. Interproximal contact loss between implant and adjacent tooth.

Ellison, TA. Presentations/abstracts: Investigating assessment of clinical performance: feasibility of adopting a new tool. Supervision regulations and its impact on clinical education and physical therapy practice.

Elmshiti, H. Presentations/abstracts: Evaluation of submandibular infections using 3-dimensional reconstruction of computed tomography images.

Elmslie, KS. Publications: KV7 channels are potential regulators of the exercise pressor reflex, *Journal of Neurophysiology*. NaV1.9 current in muscle afferent neurons is enhanced by substances released during muscle activity, *Journal of Neurophysiology*. Presentations/abstracts: Composition of TTX-S NaV current in rat muscle afferent neurons. G protein-coupled receptors potentially mediate the exercise pressor reflex. Muscle metabolite receptors to NaV1.9 channels in muscle afferent neurons.

Fay, D. Publications: Athletic trainers' experiences working with athletes with a physical disability in school-based sports, *International Journal of Athletic Therapy and Training*. Commentary on "Pediatric Assessments for Preschool Children in Digital Physical Therapy Practice: Results from a Scoping Review, *Pediatric Physical Therapy*. Presentations/abstracts: Bringing the Paralympics home: identifying and creating local adaptive sports opportunities. Para athletes: spatial and temporal sprint performance measures in athletes with hypertononia, ataxia, and athetosis. Participation in adaptive sports programs: perceptions of the parent and child.

Fay, DR. Presentations/abstracts: Defining adaptive sports experiences: a national survey of physical therapy and physical therapy assistant programs.

Fein Davis, N. Presentations/abstracts: Addressing food insecurity by increasing awareness of local resources in Centreville, Illinois.

Fick, J. Publications: Employee turnover: why medical practices lose good employees, *The Journal of Medical Practice Management*. Improving workforce experiences at United States federally qualified health centers: exploring the perceived impact of generational diversity on employee engagement, *Patient Experience Journal*. The association between effectiveness, burnout, and competency in PA leaders, *Journal of the American Academy of Physician Assistants*. The challenge of employee retention in medical practices across the United States: an exploratory investigation into the relationship between operational succession planning and employee turnover, *Advances in Health*

Care Management. Presentations/abstracts: A national qualitative study regarding healthcare leadership competencies: implications and recommendations. A systematic literature review of the relationship between resilience and burnout among healthcare executives. A systematic literature review of the relationship between using electronic health records and employee satisfaction. A systematic literature review: relationships between U.S. hospitals' executive leadership competencies and organizational VBP performance. An examination of resilience and burnout in US senior healthcare executives during the COVID-19 pandemic. Exploring the impact of patient education and medication adherence on the health outcomes of adult diabetic patients in large urban areas of the US. How does formal succession planning affect leadership sustainability and organizational performance of United States hospitals? How does multi-generational employee engagement affect United States federally qualified health centers' financial performance? Leadership competencies and patient experience: a literature review. Losing our staff: a qualitative analysis of the medical practice perspectives on operational succession planning and employee turnover. Planning for the future: a cross-sectional exploration of the relationship between operational succession planning and employee turnover in medical practices. Quality of patient care as an antecedent of patient satisfaction: a mixed-method study about inpatient acute-care hospitals across the United States. The effect of a multigenerational workforce on employee engagement in FQHCs? Understanding operational succession planning and employee turnover of healthcare organizations. Understanding the perceived impact of executive leadership competencies on VBP organizational performance of US acute care hospitals. What senior healthcare leadership competencies matter most to affect positive patient experiences in United States inpatient acute care hospitals?

Franklin, G. Presentations/abstracts: The effects of the COVID-19 pandemic on the practice of OMM.

Freiburger, R. Presentations/abstracts: Implementation of social determinants of health screening into rural family medical clinics.

Funk, S. Presentations/abstracts: Variations of the cystohepatic blood supply in American Midwestern cadavers.

Galbraith, M. Presentations/abstracts: Get a move on!

Gibson, M. Publications: Perceived benefits of the AuD degree among Canadian audiologists, *Canadian Audiologist*.

Gohlke, E. Presentations/abstracts: Alpha and omega of teaching special care.

Gold, J. Presentations/abstracts: EBD: do you practice what you preach? Are we there? Effects of cannabis on oral health. How "we" train competent evidence-based practitioners.

Goldstein, LB. Publications: Advocacy for change: an osteopathic review of traumatic brain injury among combat veterans, *Cureus*. Dental education in the time of COVID-19 and beyond, *Compendium of Continuing Education in Dentistry*. Evaluation of pain management

Please note: Peer-reviewed journal publications, presentations, and abstracts are included as reported in the Fall 2020 through Supplement 2022 *ATSU Research* newsletters, prepared by Research Support. Individuals listed were full-time and part-time ATSU faculty and staff members at the time publications, presentations, or abstracts were self-reported to Research Support.

Please note: Peer-reviewed journal publications, presentations, and abstracts are included as reported in the Fall 2020 through Supplement 2022 *ATSU Research* newsletters, prepared by Research Support. Individuals listed were full-time and part-time ATSU faculty and staff members at the time publications, presentations, or abstracts were self-reported to Research Support.

FACULTY and STAFF SCHOLARLY ACTIVITY (September 2020-December 2022)

in patients undergoing septoplasty, *Journal of Community Medicine and Public Health Reports*. Gout diagnosis and management: updated treatment guidelines, *Practical Pain Management*. Knee pain and function: nonoperative approaches to managing patellofemoral pain syndrome, *Practical Pain Management*. Pelvic inflammatory disease: diagnosis, education, and treatment options, *Practical Pain Management*. Performance arts medicine: musculoskeletal dance injuries and pain management techniques, *Practical Pain Management*. Polytrauma: managing PTSD and comorbid pain in veterans, *Psycrom Pro*. Provider perspective: carpal tunnel's association with hypothyroidism, *Practical Pain Management*. Shoulder pain and rotator cuff injuries: emerging treatments, *Practical Pain Management*. The e-sports athlete ergonomics: carpal tunnel and common injuries related to prolonged gaming, *Journal of Community Medicine and Public Health Reports*. The influence of psychological factors on temporomandibular disorders, *Journal of Sports Medicine and Pain Management*. Presentations/abstracts: A call to action: VA pilot program addressing the suicide epidemic in the veteran population.

Grady, L. Presentations/abstracts: Improving knowledge of services provided at the Family Support Center (FSC) of NYU-LH to increase ability to address social determinants of health. Why patients do not follow through with behavioral health referrals: a quality improvement project on patient-perceived barriers in a community health care setting.

Grass, AD. Publications: The contribution of ontogenetic growth trajectories on the divergent evolution of the crocodylian skull table, *The Anatomical Record*.

Gray, K. Publications: The history of medical education: a commentary on race, *Journal of the American Osteopathic Association*.

Greaves, M. Publications: Addressing oral health barriers to care in head and neck cancer patients using a novel collaborative care approach, *Clinical Case Reports*.

Greenwalt, S. Publications: Effect of the GoKnee intervention on knee range of motion, pain, and functional mobility after total knee arthroplasty, *Open Access Library Journal*.

Hale, T. Publications: Neurodegenerative diseases and the auditory-vestibular system, *Hearing Journal*.

Han, BH. Publications: Amentoflavone promotes cellular uptake and degradation of amyloid-beta in neuronal cells, *International Journal of Morphology*. Amentoflavone: a bifunctional metal chelator that controls the formation of neurotoxic soluble A β 42 oligomers, *ACS Chemical Neuroscience*. Biflavonoid-induced disruption of hydrogen bonds leads to amyloid- β disaggregation, *International Journal of Morphology*. SIRT1 mediates hypoxic preconditioning induced attenuation of neurovascular dysfunction following subarachnoid hemorrhage, *Experimental Neurology*. Sirtuin 1 mediates protection against delayed cerebral ischemia in subarachnoid hemorrhage in response to hypoxic preconditioning, *Journal of the American Heart Association*. Presentations/

abstracts: Oxidative stress induced by oxysterols in the brain endothelial cells.

Hansen, BH. Presentations/abstracts: Protection against amyloid- β -induced cerebrovascular dysfunction.

Hansen, J. Publications: A novel, interactive game to improve understanding of respiratory control pathways in first-year medical students, *Advances in Physiology Education*.

Harris, N. Presentations/abstracts: Presence of a Madelung Deformity in a female collegiate volleyball player.

Hastie, M. Publications: The pathway to ACSM Fellowship: what to know and how to apply, *ACSM's Health & Fitness Journal*.

Haxton, J. Publications: Osteopathic manipulative treatment and the Spanish flu: a historical literature review, *Journal of the American Osteopathic Association*.

Heath, DM. Presentations/abstracts: ATSU Dreamline Pathways™ Program: student mentoring. Locally grown: community health centers mentor local students as "hometown scholars" to match students in ATSU-SOMA's contextual learning curricular model. Preparing incoming medical students for success using online prematriculation coursework.

Hernandez, A. Presentations/abstracts: Fracture resistance of CAD/CAM crowns fabricated with novel lithium disilicate combinations. Fracture resistance of chair-side CAD/CAM lithium disilicate molar crowns. Fracture strength of CAD/CAM lithium disilicate crowns fabricated with different thicknesses.

Hodder, J. Publications: Appropriate prescribing of dental prophylaxis in patients with orthopedic implants, *Journal of the American Academy of Physician Assistants*.

Houser, JJ. Publications: Dermatologic and ophthalmologic treatment of erythema multiforme major: a case report, *Cureus*. Development of competency in needle-guided procedures through the use of soft-embalmed cadavers, *Missouri Medicine*. Presentations/abstracts: Characterization of colorectal polyps in cadavers. Clinically significant morphology of the internal thoracic artery branches. The biomechanics of pedal anchoring in *Alligator mississippiensis*. Variations of the cystohepatic blood supply in American Midwestern cadavers.

Howell, S. Publications: Dental anesthesia for medical providers: a novel interprofessional course, *The Journal of Physician Assistant Education Association*. Implementation of teledentistry for orthodontic practices, *Journal of the World Federation of Orthodontists*. Interprofessional clinical training based in a federally qualified health center: a short report, *Journal of Interprofessional Care*. Teledentistry for patient-centered screening and assessment, *Dental Clinics of North America*. Teledentistry platforms for orthodontics, *Journal of Clinical Pediatric Dentistry*. Presentations/abstracts: Assessment of LGBTQ knowledge and attitudes among health care student clinicians: a pilot study. Gingival health status of

children and adolescent juvenile offenders: a periodontal needs assessment. IPE from the classroom to practice. Lesbian, gay, bisexual, transgender, queer, intersex, asexual, and other (LGBTQIA+) education in dental schools. Storytelling for health equity: how to motivate people to commit to action. The economic and hourly impacts of teledentistry on patients. The economic and hourly impacts of teledentistry on suburban patients. The social determinants of health up close and personal: an interprofessional learning experience. Training tools for teledentistry: preparing our doctors and patients to meet virtually.

Hu, J. Presentations/abstracts: Hiking related fatalities Pinal County, AZ.

Huhn, M. Presentations/abstracts: Comparison of outcomes of diagnostic palpation training delivery methods.

Huxel Bliven, KC. Publications: How strong is the evidence supporting shoulder injury risk factors in adolescent overhead sport athletes? *Athletic Training and Sports Health Care*. Our commitment to diversity, equity, and inclusion, *Journal of Sport Rehabilitation*. Patient-reported outcome measures as an outcome variable in sports medicine research, *Frontiers in Sports and Active Living*. Risk factors for plantar fasciitis in physically active individuals: a systematic review and meta-analysis, *Sports Health*. Training load capacity, cumulative risk, and bone stress injuries: a narrative review of a holistic approach, *Frontiers in Sports and Active Living*. Presentations/abstracts: Clinical evaluation findings in patients diagnosed with deltoid ligament ankle sprains: a report from the Athletic Training Practice-Based Research Network. Descriptive report of injuries sustained by secondary school baseball players categorized by level of community socioeconomic status. Graduate students' use and perceptions of learning resources provided in a human anatomy course. Quantitative median nerve assessment at carpal tunnel among repetitive wrist use dental practitioners. Reading fatigue: the cost of varying page lengths in e-textbooks on student self-regulation skills. Relationships between hip, thoracolumbar and glenohumeral ranges of motion in Division I collegiate baseball players. Strategies for implementing team-based learning into a synchronous online graduate anatomy course. Strength and range of motion differences at the hip, thoracolumbar, and glenohumeral joints between Division I and Division III baseball players. The relationships between early sports specialization, overuse injuries, and health-related quality of life in throwing athletes. Upper extremity injury history impacts current health related quality of life in collegiate baseball and softball athletes.

Jackson, B. Publications: A mixed-methods study of the effectiveness and perceptions of a course design institute for health and science educators, *BMC Medical Education*. Presentations/abstracts: Teaching essential course design skills: investigation of a professional development opportunity for health science educators.

Jaqua, BM. Publications: Differences between emergency medicine residency programs that accept the Comprehensive Osteopathic Medical Licensing Examination of the United

States and those that prefer or only accept the United States Medical Licensing Examination, *Cureus*. National resident discussions of the transitions in medical education and the UME-GME-CME continuum, *Journal of Graduate Medical Education*. Storytelling and written reflection: tools to foster meaning and connection in graduate medical education settings, *Journal of Graduate Medical Education*. What do stakeholders want from resident conference programming? *Journal of Graduate Medical Education*. Presentations/abstracts: Fostering meaning and connections through storytelling and written reflection.

Johnson, HA. Presentations/abstracts: Social mission and health equity from classroom to clinic to practice.

Johnson, J. Publications: Anatomical and radiographic characterization of the lateral patellofemoral ligament of the knee, *Missouri Medicine*. Presentations/abstracts: Assessment of the safety of osteopathic manipulative treatment based on patient report: an observational study conducted by DO-Touch.NET. Osteopathic manipulative treatment techniques nomenclature: is there a need to improve consistency. Patient-reported outcomes following a single session of osteopathic manipulative treatment: a prospective, observational study conducted by DO-Touch.NET. The effects of the COVID-19 pandemic on the practice of OMM.

Jones, B. Presentations/abstracts: Social determinants of health in athletic training education.

Jones, K. Presentations/abstracts: Gender differences in screening colonoscopies: ADR, WT, and adenomas. Get a move on!

Kahn, M. Presentations/abstracts: Complete dentures: an update on materials, techniques, and procedures.

Kays, P. Publications: Empathy during patient-provider interactions for women with chronic pelvic pain: a qualitative study, *Journal of Women's Health Physical Therapy*. Presentations/abstracts: Patient-provider interactions and influence on health care for women with chronic pelvic pain.

Keane, JF. Publications: Advocacy for change: an osteopathic review of traumatic brain injury among combat veterans, *Cureus*. Evaluation of pain management in patients undergoing septoplasty, *Journal of Community Medicine and Public Health Reports*. Gout diagnosis and management: updated treatment guidelines, *Practical Pain Management*. Knee pain and function: nonoperative approaches to managing patellofemoral pain syndrome, *Practical Pain Management*. Pelvic inflammatory disease: diagnosis, education, and treatment options, *Practical Pain Management*. Polytrauma: managing PTSD and comorbid pain in veterans, *Psycrom Pro*. Provider perspective: carpal tunnel's association with hypothyroidism, *Practical Pain Management*. Shoulder pain and rotator cuff injuries: emerging treatments, *Practical Pain Management*. The e-sports athlete ergonomics: carpal tunnel and common injuries related to prolonged gaming, *Journal of Community Medicine and Public Health Reports*. Presentations/abstracts: A call to action: VA pilot program addressing the suicide epidemic in the veteran population.

Kershaw, MA. Publications: Bacterial endocarditis caused by *Sphingomonas paucimobilis*: a case report and literature review, *Case Reports in Infectious Diseases*.

Kim-Han, JS. Publications: Amentoflavone promotes cellular uptake and degradation of amyloid-beta in neuronal cells, *International Journal of Morphology*. Presentations/abstracts: Composition of TTX-S NaV current in rat muscle afferent neurons. G protein-coupled receptors potentially mediate the exercise pressor reflex. Muscle metabolite receptors to NaV1.9 channels in muscle afferent neurons.

Kirsch, J. Publications: Impact of osteopathic manipulative techniques on the management of dizziness caused by neuro-otologic disorders: protocol for systematic review and meta-analysis, *International Journal of Osteopathic Medicine*. Presentations/abstracts: Effect of osteopathic manipulative treatment on infant insomnia. Impact of osteopathic manipulative techniques on the management of dizziness caused by neuro-otologic disorders: systematic review and meta-analysis. Interrelatedness of forearm and neck somatic dysfunction: an osteopathic manipulative treatment case report. Standardizing methodology for headache research in manipulative therapy.

Kiselyk, A. Presentations/abstracts: Ensuring an equitable admissions process: using non-cognitive variables.

Kondrashov, P. Publications: Anatomical and radiographic characterization of the lateral patellofemoral ligament of the knee, *Missouri Medicine*. Fibrocartilaginous metaplasia and neovascularization of the anterior cruciate ligament in patients with osteoarthritis, *Clinical Anatomy*. Late Pleistocene (Eemian) mollusk and small mammal fauna from Mikhailovka-5 (Kursk oblast, Central Russia), *Fossil Imprint*. Selection of phalanx development in the evolution of the bird wing, *Molecular Biology and Evolution*. Use of the contralateral knee as a control in the destabilization of medial meniscus osteoarthritis rat model, *Missouri Medicine*. Presentations/abstracts: Immunohistochemical analysis of MTHFR in rat and human eyes.

Kondrashova, T. Publications: Development of competency in needle-guided procedures through the use of soft-embalmed cadavers, *Missouri Medicine*. Educational value of ultrasonography used as a diagnostic tool by medical students at a student-run free clinic, *Missouri Medicine*. Effect of occipitoatlantal decompression on cerebral blood flow dynamics as evaluated by Doppler ultrasonography, *Journal of the American Osteopathic Association*. Interprofessional approach to learning vascular access with ultrasonography by medical students and nurses, *Missouri Medicine*. The myodural bridge of the American alligator (*Alligator mississippiensis*) alters CSF flow, *Journal of Experimental Biology*. Variations in the cerebrospinal fluid dynamics of the American alligator (*Alligator mississippiensis*), *Fluids and Barriers of the CNS*. Presentations/abstracts: Development of hands-on skills in diagnostics of lung diseases using ultrasonography while reducing medical student contact with each other during the pandemic.

Konecny, L. Presentations/abstracts: The effect of wellness initiatives on well-being and burnout symptoms in surgical residents.

Kuamo'o, A. Publications: Higher education leaders' framing of organizational decisions during COVID-19, *Journal of Allied Health*.

Kuettel, JM. Publications: Configuration variability of the six-minute walk test among licensed physical therapists working with neurologic conditions: a pilot survey, *Physiotherapy Theory and Practice*. Presentations/abstracts: Clinical variability of six-minute walk test protocols by licensed physical therapists: a survey.

Kumar, S. Publications: Can probiotics stop oral cancer progression? *Evidence-Based Dentistry*. Clinical case and assessment databases in periodontology created from virtual clinic rotation, *Journal of Dental Education*. Common dental and periodontal diseases, *Dermatologic Clinics*. Could the oral cavity be a target organ in SARS-CoV-2 infection? *Evidence-Based Dentistry*. History of dysplasia and primary site associated with recurrence in T1NO oral squamous cell carcinoma, *Oral Surgery Oral Medicine Oral Pathology Oral Radiology*. How do primary care doctors compare to dentists in the referral of oral cancer? *Evidence-Based Dentistry*. How does the novel piezoelectric 11 Gracey Curette compare to Gracey Curette or piezoelectric scaler? *Evidence-Based Dentistry*. Implementation science and periodontal practice: translation of evidence into periodontology, *Periodontology 2000*. Management of cyclosporine-influenced gingival enlargement with azithromycin, *Clinical Advances in Periodontics*. Periodontal disease and medical maladies: what do we really know? *Journal of the American Dental Association*. Presentations/abstracts: Effect of d-PTFE membrane surface on soft and hard tissue healing in ridge preservation: a case report. Reporting quality of abstracts of randomized controlled trials in periodontology. Reporting quality of cohort studies in periodontology before and after the STROBE publication: a trend analysis. Scenario-based training research project: a self-paced approach to offer professional development for clinical educators.

LaBaere, RJ II. Publications: Impact of the single accreditation system on Missouri osteopathic graduate medical education, *Missouri Medicine*. Presentations/abstracts: Integrating scholarly activity into a crowded osteopathic recognition curriculum. KCOM match results 2017-2021: data-driven insights and collaborative match planning. Supporting osteopathic recognition with scholarship opportunities.

Lam, KC. Publications: Addressing the habitual practice issue: the role of unlearning in promoting evidence-based practice and lifelong learning, *Athletic Training Education Journal*. Characteristics of injuries occurring during cross-country: a report from the Athletic Training Practice-Based Research Network, *Journal of Athletic Training*. Characterizing athletic healthcare: a perspective on methodological challenges, lessons learned, and paths forward, *Front Sports Act Living*. Concurrent validity of the Concussion Quality of Life-Youth patient-report outcome measure (version 1), *Brain Injury*. Epidemiology of patients with dance-related injuries presenting to emergency departments in the United States, 2014-2018, *Sports Health*. Knowledge translation in athletic training: considerations for bridging the knowledge-to-practice gap, *Journal of Athletic Training*. Musculoskeletal injury in

Please note: Peer-reviewed journal publications, presentations, and abstracts are included as reported in the Fall 2020 through Supplement 2022 *ATSU Research* newsletters, prepared by Research Support. Individuals listed were full-time and part-time ATSU faculty and staff members at the time publications, presentations, or abstracts were self-reported to Research Support.

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Reserve Officers' Training Corps: a report from the Athletic Training Practice-Based Research Network, *Orthopaedic Journal of Sports Medicine*. Patient-reported outcome measures as an outcome variable in sports medicine research, *Frontiers in Sports and Active Living*. Patient-reported outcome measures for pediatric patients with sport-related injuries: a systematic review, *Journal of Athletic Training*. Readability of the Disablement in the Physically Active scale in pediatric athletes: a preliminary investigation, *International Journal of Athletic Therapy and Training*. The critical need for advanced training in electronic records use: implications for clinical practice, education, and the advancement of athletic training, *Journal of Athletic Training*. Presentations/abstracts: Academic electronic medical records: an education tool to enhance patient documentation and health information technology in clinical practice. Academic electronic medical records: an educational tool to enhance patient documentation and health information technology in clinical practice. Athletic trainers' perceptions of and experiences with unlearning in clinical practice. Clinical evaluation findings in patients diagnosed with deltoid ligament ankle sprains: a report from the Athletic Training Practice-Based Research Network. Concurrent validity of the Concussion Quality of Life-Youth patient-reported outcome measure (version 1). Direct costs of care for adolescent patients with and without persisting concussion symptoms in United States secondary schools: a report from the Athletic Training Practice-Based Research Network. Does treatment provided for lateral ankle sprains differ between patients with recurrent and first-time injuries? A report from the Athletic Training Practice-Based Research Network. Epidemiology of patients presenting to emergency departments in the United States with football-related injuries, 2006-2019. Epidemiology of wrestling-related injuries treated in US emergency departments, 2007-2020. Injury and treatment characteristics of sport-specific injuries from 2013-2020: a report from the Athletic Training Practice-Based Research Network. Making clinical data work for you: an interactive, hands-on experience in turning data into usable information for quality improvement efforts. NATA Foundation research grants workshop: strategies and best practices. Test-retest reliability and concurrent validity of the Concussion Quality of Life-Youth patient-report outcome measure. The immediate impact of ankle and knee injuries on health-related quality of life in adolescent athletes: a report from the Athletic Training Practice-Based Research Network. The impact of treatment characteristics on self-reported function at the time of return to play following an ankle sprain injury: a report from the Athletic Training Practice-Based Research Network. Use of region-specific patient-reported outcome measures by athletic trainers.

Latvis, L. Presentations/abstracts: A national qualitative study regarding healthcare leadership competencies: implications and recommendations.

Leibow, W. Presentations/abstracts: CBCT imaging to locate MB2 in maxillary first molars. Where's MB2?

Lesh, E. Presentations/abstracts: Supraclavicular lymphadenitis in a child with COVID-19 infection.

Lewis, JH. Publications: Accelerating use of self-measured blood pressure monitoring (SMBP) through clinical-community care models, *Journal of Community Health*. Applying the Value Transformation Framework in federally qualified health centers to increase clinical measures performance, *Journal for Healthcare Quality*. Are community health center patients interested in self-measured blood pressure monitoring (SMBP): and can they do it? *Integrated Blood Pressure Control*. Impact of COVID-19-related care disruptions on blood pressure management and control in community health centers, *BMC Public Health*. Patient and staff satisfaction and experience while transforming health center systems, *Risk Management and Healthcare Policy*. The power of interdependence: linking health systems, communities, and health professions educational programs to better meet the needs of patients and populations, *Medical Teacher*. The Value Transformation Framework: applied to diabetes control in federally qualified health centers, *Journal of Multidisciplinary Healthcare*. Presentations/abstracts: Addressing food insecurity by increasing awareness of local resources in Centreville, Illinois. Approaches to nutritional health awareness and first aid in students with special needs. Assessing the impact of team-based care on blood pressure control in patients with hypertension. Athletic trainers' observations of social determinants of health in the secondary school setting. Athletic trainers' perceptions of and experience with social determinants of health in the collegiate and university setting. Athletic trainers' perceptions of and experiences with social determinants of health in the secondary school setting. Athletic trainers' perceptions of social determinants of health. Blood pressure screening of underserved individuals in southern Illinois. Community centered approach to educating mothers on health-related topics. COVID-19 vaccine hesitancy amongst adult patients at Adelante Healthcare in Maricopa County, AZ. Effectiveness of educational events on osteopathic medicine awareness amongst healthcare workers at Family HealthCare Network. Evaluating health knowledge, literacy, and activity levels of elementary students through the Nutrition and Health Awareness program. Evaluation of intimate partner violence screening for pregnant women at Near North Health Services Corporation (NNHSC). Examining patient and provider perspectives of telemedicine in a community health clinic setting. Exploring clinician and staff knowledge, attitudes and practices related to childhood immunizations. Exploring provider stress and the relationship to recruitment and retention in a community health center system. Exploring the impact of EHR optimization on clinician well-being. Factors influencing retention of primary care providers in rural Northern Arizona. Focus group model for collaborative health education with refugees in King County, WA. Health education video development: improving health literacy in Afghan refugees to better navigate the US pharmacy system. Hepatitis C treatment and management efficacy in a primary care setting. Hygiene and sanitation needs of people experiencing homelessness in Portland, OR.

Implementing a blood pressure measurement protocol to improve the diagnosis and treatment of hypertension. Implementing the CRAFFT at family health centers (FHCs) at NYU Langone. Improving knowledge of services provided at the Family Support Center (FSC) of NYU-LH to increase ability to address social determinants of health. Leading and teaching in the nation's health centers to address health disparities: the PCTE fellowship. Mental health workshops with high school students. Mindfulness-based interventions in addressing negative health outcomes related to adverse childhood experiences. Mini Docs: a novel online course delivery to empower student advocates for SARS-CoV-2 safety on Oahu. Mini docs: empowering Waianae coast adolescents to be advocates for their health and their community. Misinformation nation: examining COVID-19 vaccine hesitancy and misinformation among parents of pediatric patients. Near North Health quality improvement program: intimate partner violence education, awareness, and resources. Observation of social determinants of health in athletic health care. Pour some sugar on me: an analysis of diabetes telehealth follow-ups. Preparing for pandemics: lesson plan design for elementary-aged children. Prioritizing preventative health in older adults residing in long term care facilities through vaccination. Provider preferences regarding the benefits and challenges of utilizing telemedicine. Refining the blood pressure measurement protocol to improve the diagnosis and treatment of hypertension. Reviewing the medical utility of incorporating racial identifiers in common diagnostic tools. Supporting student learning and transformational change in health care. The impact of methamphetamine abuse and mental health outreach in high school students of O'ahu, Hawai'i. The Primary Care Transformation Executive (PCTE) fellowship: fostering interprofessional education, practice, and research for primary care clinicians. Transforming health and health professions education. Twists, turns, and blockages to colorectal screening follow-up. Use of the Nutrition and Health Awareness (NHA) program in improving health knowledge and attitudes among New York City children. Virtual health and wellness program for elementary students. Why patients do not follow through with behavioral health referrals: a quality improvement project on patient-perceived barriers in a community health care setting.

Lewis, R. Publications: A novel, interactive game to improve understanding of respiratory control pathways in first-year medical students, *Advances in Physiology Education*.

Lipke, L. Publications: Trends in ... controlled vocabulary and health equity, *Medical Reference Services Quarterly*. Presentations/abstracts: Building an interprofessional search strategy for manual therapy literature: where's the vocabulary. Inflammatory changes in healthy adults due to e-cig use: a scoping review.

Lodato, PB. Publications: The effect of two ribonucleases on the production of Shiga toxin and stx-bearing bacteriophages in Enterohaemorrhagic Escherichia coli, *Scientific Reports*. Presentations/abstracts: Effect of anaerobiosis on the expression

of ribonucleases in EHEC. Role of two ribonucleases in the virulence of pathogenic Escherichia coli.

Loguda-Summers, D. Presentations/abstracts: Printing in curriculum and research: create, engage, and empower—seven years later! The biomechanics of pedal anchoring in *Alligator mississippiensis*.

Love, A. Presentations/abstracts: Importance of defining the social and cultural identity of college students for improved well-being on campus.

Lovell, K. Publications: Self-motivation and self-direction in team-based and case-based learning, *Journal of Dental Education*.

Luebbering, C. Publications: Dental students' knowledge and attitudes about human papillomavirus prevention, *Vaccines*. Presentations/abstracts: The effects of the COVID-19 pandemic on the practice of OMM.

Lynch, D. Presentations/abstracts: Identification of an extracellular inhibitor of persistence in *S. aureus*.

Maddix, B. Presentations/abstracts: ATSU Dreamline Pathways™ Program: student mentoring.

Mahrous, AM. Publications: Preparing the next generation of clinicians for practice using augmented and artificial intelligence, *Compendium of Continuing Education in Dentistry*.

Makin, IRS. Publications: Ultrasound for aesthetic applications: a review of biophysical mechanisms and safety, *Journal of Ultrasound in Medicine*. Utility of high-resolution ultrasound in measuring subcutaneous fat thickness, *Lasers in Surgery and Medicine*. Presentations/abstracts: Charging of devices for healthcare applications, using ultrasound wireless power. Demonstration of healthcare-specific Li-ion battery charging using ultrasound power delivery. Effect of apical patency on hypochlorite extrusion in a negative pressure system. High-resolution ultrasound imaging for temporomandibular joint disorder assessment. Quantitative median nerve assessment at carpal tunnel among repetitive wrist use dental practitioners. Relationship between apical patency and irrigant fluid extrusion. Salivary pH and buffering change following use of pHighter Mint™.

Markand, S. Presentations/abstracts: Analysis of variation in the obturator artery in Midwestern donor bodies. Immunohistochemical analysis of MTHFR in rat and human eyes. Morphometric analysis of pyramidalis muscle in Midwestern Americans. Protective effects of melatonin on elevated homocysteine in human RPE cells. Variations of the cystohepatic blood supply in American Midwestern cadavers.

Mathieson, K. Publications: Authentic leadership: does it relate to job satisfaction and engagement? *Nursing Management*. Pharmacovigilance assessment of cardiac implications of nicotine replacement therapy among smokers, *Current Drug Safety*.

Matthews, E. Publications: Examining the role of HPV communication training in the knowledge, attitudes, comfort, and confidence

of dental hygiene students, *Journal of Dental Hygiene: JDH*. Senior dental students' perceptions of evidence-based dentistry, *European Journal of Dental Education*. Presentations/abstracts: Dietary supplement use, knowledge, and perceptions among students enrolled in coordinated programs in dietetics.

McFadden, E. Presentations/abstracts: Prioritizing preventative health in older adults residing in long term care facilities through vaccination.

McGrew, S. Presentations/abstracts: ATSU Dreamline Pathways™: moving the dial—student mentoring 360 degrees. ATSU Dreamline Pathways™ Program: moving the dial—why downstream matters.

McIsaac, TL. Publications: Alexander technique vs. targeted exercise for neck pain: a preliminary comparison, *Applied Sciences*. Presentations/abstracts: Clinical variability of six-minute walk test protocols by licensed physical therapists: a survey.

McLeod, DE. Publications: Combination scan technique: an innovative approach to diagnosing altered passive eruption, *Journal of Cosmetic Dentistry*. Dental education in the time of COVID-19 and beyond, *Compendium of Continuing Education in Dentistry*.

McNatt, MK. Publications: The problem of the color line: spatial access to hospital services for minoritized racial and ethnic groups, *Health Affairs (Millwood)*. Presentations/abstracts: Climate change inequities among rural American Indian communities. Combating obesity and chronic disease in rural America. Geographic and ethnic disparities among US border residents. Long COVID's impact on Southwestern American Indian populations.

Meek, B. Presentations/abstracts: COVID-19 vaccine hesitancy amongst adult patients at Adelante Healthcare in Maricopa County, AZ. Evaluating health knowledge, literacy, and activity levels of elementary students through the Nutrition and Health Awareness program. Preparing for pandemics: lesson plan design for elementary-aged children.

Mehta, Z. Publications: Neurodegenerative diseases and the auditory-vestibular system, *Hearing Journal*.

Michaelis, R. Publications: Interprofessional clinical training based in a federally qualified health center: a short report, *Journal of Interprofessional Care*. Presentations/abstracts: Focus group model for collaborative health education with refugees in King County, WA. Health education video development: improving health literacy in Afghan refugees to better navigate the US pharmacy system. Reviewing the medical utility of incorporating racial identifiers in common diagnostic tools.

Michaels, VG. Presentations/abstracts: Growing our own at A.T. Still University: integrated primary care, oral health, and behavioral health. Social mission and health equity from classroom to clinic to practice.

Middlemas, D. Publications: Chronic SSRI treatment, but not norepinephrine reuptake inhibitor treatment, increases neurogenesis in juvenile rats, *International Journal of Morphology*. Presentations/abstracts: Dose-response to ketamine as an antidepressant in juvenile rats. Investigating ketamine as a

rapid-acting antidepressant in juvenile rats. Variability in researcher dependent data collection, rat behavioral testing.

Moore, H. Publications: Employee turnover: why medical practices lose good employees, *The Journal of Medical Practice Management*. The challenge of employee retention in medical practices across the United States: an exploratory investigation into the relationship between operational succession planning and employee turnover, *Advances in Health Care Management*. Presentations/abstracts: Losing our staff: a qualitative analysis of the medical practice perspectives on operational succession planning and employee turnover.

Moore, SJ. Publications: Comparing physicians and PAs as solo providers in a rural ED: a pilot study, *Journal of the American Academy of Physician Assistants*.

Moralez, K. Presentations/abstracts: Sedation dentistry in outpatient clinical settings.

Morgan, C. Presentations/abstracts: Innovations in sharing community oriented primary care research with communities. What influences trainees to seek employment in community health centers? Medical resident and student perspectives.

Motahari, M. Publications: Interprofessional clinical training based in a federally qualified health center: a short report, *Journal of Interprofessional Care*. Presentations/abstracts: IPE from the classroom to practice.

Muller, R. Presentations/abstracts: Impact of removable partial dentures on periodontal health of patients.

Musawi, A. Publications: Effectiveness of an interactive training software on the accuracy of inferior alveolar nerve block (IANB) injection at a preclinical level (pilot study), *Journal of Dental Education*. Presentations/abstracts: Development of dental interactive case-based learning (DICBL) model. Students' perception towards phased approach to resuming education during the COVID-19 pandemic.

Norimatsu, Y. Presentations/abstracts: Effect of zinc on beta2-adrenergic receptor signal transduction. Effects of mitragynine on the mu-opioid receptor in *Xenopus oocytes*. MD simulation of the interaction between SARS-CoV-2 RBD and human ACE2.

Normore, C. Publications: Social determinants of health: considerations for athletic health care, *Journal of Athletic Training*. Presentations/abstracts: ATSU Dreamline Pathways™ Program: moving the dial—why downstream matters. Fixing the framework.

Nurrohman, H. Publications: Biomimetic whitening effect of polyphosphate-bleaching agents on dental enamel, *Biomimetics (Basel)*. Effects of accelerated aging on color stability and surface roughness of a biomimetic composite: an in vitro study, *Biomimetics (Basel)*. Enhanced silver diamine fluoride therapy using the PILP method: a nanoindentation study, *Dental Materials Journal*. Polymer-Induced Liquid Precursor (PILP) remineralization of artificial and natural dentin carious lesions evaluated by nanoindentation and microcomputed tomography, *Journal of Dentistry*. Real-time collaborative question-making activity to enhance students' knowledge of evidence-based dentistry, *Journal of Dental Education*.

Please note: Peer-reviewed journal publications, presentations, and abstracts are included as reported in the Fall 2020 through Supplement 2022 *ATSU Research* newsletters, prepared by Research Support. Individuals listed were full-time and part-time ATSU faculty and staff members at the time publications, presentations, or abstracts were self-reported to Research Support.

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Improving electronic health record education

By Arselia Gales

When A.T. Still University-Arizona School of Health Sciences' Cailee Welch Bacon, PhD, ATC, associate professor, athletic training, and Kenny Lam, ScD, ATC, professor of clinical research, interdisciplinary health sciences, saw a need to improve documentation behaviors among athletic trainers in 2012, they decided to get to the root of the issue.

"We went on a 10-year journey exploring the documentation behaviors of athletic trainers across a variety of settings, and one thing was consistent throughout our findings," Dr. Bacon says. "They were not being taught adequately or consistently during their professional education, and there was a strong desire for some type of professional development opportunity."

Armed with this critical information, the two collaborated on an academic electronic health record (AEHR) system that is a free, web-based platform for athletic training students to learn how to navigate an electronic health record system.

"It's really challenging to teach students to use electronic health records in an effective and complete way. There's a need for a tool where students can practice and get the skills they need to become competent and effective in using those systems when they become healthcare providers," Dr. Lam says.

The two have secured four internal grants to develop this system, including \$7,000 from ATSU'S Highly Flexible Learning Options Using Technology Grant for their submission, "The Use of an Academic Electronic



Dr. Kenny Lam



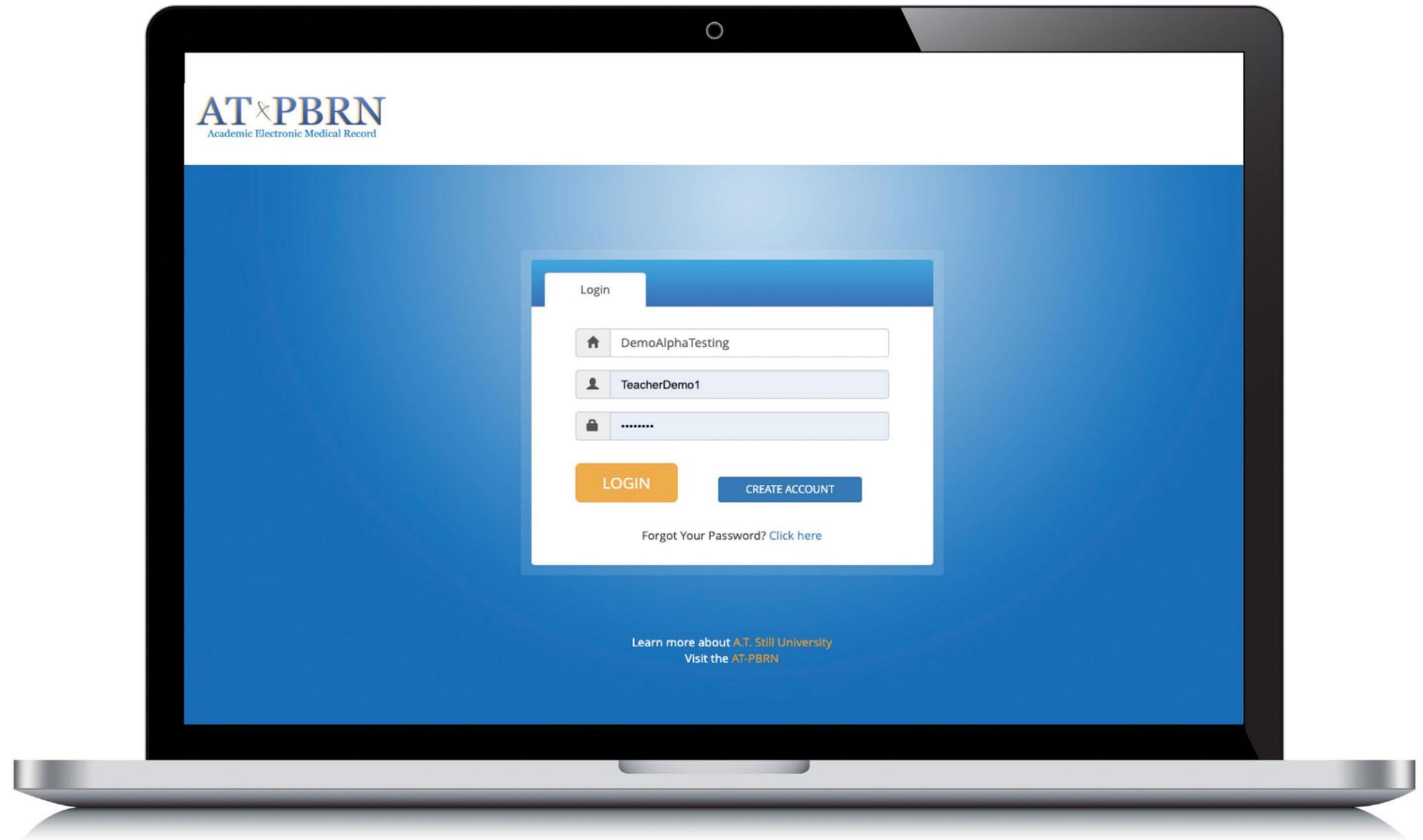
Dr. Cailee Welch Bacon

Health Record to Promote Highly Flexible Learning Opportunities in Athletic Training Education."

Dr. Bacon describes the AEHR as a hybrid-flexible, or HyFlex, learning tool because students are able to engage with it anywhere and anytime they have an internet connection. The tool gives them the freedom to explore the ins and outs of an electronic records system without the fear of wreaking havoc within the system or on a patient's record.

"We've essentially developed a platform that creates a safe space where students can push a button not knowing what it's going to do and knowing they aren't going to mess up a patient record. They can explore and develop habits that are suitable for them," Dr. Bacon says.

Drs. Bacon and Lam, along with the rest of their development team, have also built additional features in the AEHR not typically seen in a clinical electronic records system. For example, they've embedded a social determinants of health observation card to remind students to check for these when working with a patient.



When they developed the AEHR program in 2021, Drs. Bacon and Lam went through a beta testing phase with 11 athletic training programs across the country. This phase helped them determine what was working, what wasn't, and what was needed to successfully implement the system. Then, during the program's second phase, they added eight more programs, so 19 athletic training programs across the country were using their AEHR system. The two researchers are now studying how easy it is to teach educators and students to use the platform and how it may be incorporated in daily classroom use.

And the two don't want to stop with athletic training. "I think the AEHR has an impact not only for our profession and not only for healthcare, but also for our school," Dr. Lam says.

"We've focused just on athletic training, but our end goal is for this to be an interprofessional tool where students from a variety of different health professions programs can use it together to learn how to collaborate on a patient case," Dr. Bacon says.

FACULTY and STAFF SCHOLARLY ACTIVITY (September 2020-December 2022)

The role of process-directing agents on enamel lesion remineralization: fluoride boosters, *Biomimetics*. Presentations/abstracts: Effect of novel over-the-counter LED whitening products on CAD/CAM lithium disilicate ceramics.

Obadia, S. Presentations/abstracts: Growing our own at A.T. Still University: innovative learning integration. High value training relationships with community health center partners.

Obisesan, O. Publications: Medical students' perceptions of understanding skills needed in treating cardiac patients through simulation-based encounters in a clinical skills curriculum, *Journal of Osteopathic Medicine*. Technologists' experience providing patient education in a pediatric setting, *Radiologic Technology*. The CMS emergency preparedness rule: challenges for rural medical centers, *Risk, Hazards, and Crisis in Public Policy*. Presentations/abstracts: Improving self-efficacy in chronically-ill individuals: a first look at the effectiveness of a chronic disease self-management program in Southeast Missouri.

Olson, JH. Presentations/abstracts: Preparing incoming medical students for success using online prematriculation coursework.

Omar, H. Publications: Attitudes of dental and chiropractic students towards a shared learning programme: an interprofessional learning model, *European Journal of Dental Education*. Development and implementation of an e-tutorial to provide tobacco cessation training for dental students, *Journal of Dental Education*. Effectiveness of an interactive training software on the accuracy of inferior alveolar nerve block (IANB) injection at a preclinical level (pilot study), *Journal of Dental Education*. New antimicrobial and collagen crosslinking formulated dentin adhesive with improved bond durability, *Journal of the Mechanical Behavior of Biomedical Materials*. Real-time collaborative question-making activity to enhance students' knowledge of evidence-based dentistry, *Journal of Dental Education*. Web-based standardized patient encounters for preclinical dental students during COVID-19 pandemic, *Journal of Dental Education*. Presentations/abstracts: Development of dental interactive case-based learning (DICBL) model. Lessons learned from online learning during COVID-19. Students' perception towards phased approach to resuming education during the COVID-19 pandemic.

Ostrowski, TD. Publications: Autonomic dysfunction impairs baroreflex function in an Alzheimer's disease animal model, *Journal of Alzheimer's Disease*. Presentations/abstracts: Glutamatergic signaling in a rat model of Alzheimer's disease (AD). nTS Glutamate signaling in the chemoreflex axis of an Alzheimer's disease rat model. nTS glutamatergic signaling in a rat model of Alzheimer's disease. Oxidation to a respiratory brainstem area in an Alzheimer's rat model.

Palmieri, PA. Publications: Attitudes and beliefs of nurses and physicians about managing sexual health in primary care: a multi-site cross-sectional comparative study, *Nursing Open*. Attitudes toward caring for

people living with HIV/AIDS: a cross-sectional study of nursing faculty in six countries, *Open AIDS Journal*. Critical care guidance for tracheostomy care during the COVID-19 pandemic: a global, multidisciplinary approach, *American Journal of Critical Care*. Improving the physical health of psychiatric hospital residents: an evaluation of an obesity education program for mental health professionals, *Healthcare*. Motherhood and decision-making among women living with HIV in developed countries: a systematic review with qualitative research synthesis, *Reproductive Health*. Patient safety culture in European hospitals: a comparative mixed methods study, *International Journal of Environmental Research and Public Health*. Patient safety culture in Latin American hospitals: a systematic review with meta-analysis, *International Journal of Environmental Research and Public Health*. Psychometric properties of the Connor-Davidson Resilience Scale for South America (CD-RISC-25SA) in Peruvian adolescents, *Children*. Reproductive decision-making of Black women living with HIV: a systematic review, *Womens Health*. "Staying alive" with antiretroviral therapy: a grounded theory study of people living with HIV in Peru, *BMJ Global Health*. The effectiveness of care bundles including the Braden scale for preventing hospital acquired pressure ulcers in older adults hospitalized in ICUs: a systematic review, *The Open Nursing Journal*. The meaning of postpartum sexual health for women living in Spain: a phenomenological inquiry, *BMC Pregnancy and Childbirth*. The patient-centered medical home as an intervention strategy for diabetes mellitus: a systematic review of the evidence, *Current Diabetes Review*. Tracheostomy during COVID-19 pandemic: comparison of international perioperative care protocols and practices in 26 countries, *Otolaryngology-Head and Neck Surgery*. Women caring for husbands living with Parkinson's disease: a phenomenological study protocol, *Journal of Personalized Medicine*. Presentations/abstracts: Resilience in Latin American adolescents: a different construct?

Papademetriou, M. Publications: The use of a modified miniscrew-assisted rapid palatal expander to correct bilateral posterior crossbite and unilateral Class II malocclusion, *American Journal of Orthodontics & Dentofacial Orthopedics*.

Park, JH. Publications: A CBCT evaluation of esthetic preference regarding the perceived facial attractiveness of young Korean female adults with a normal skeletal pattern, *Sensors*. A CBCT evaluation of midpalatal bone density in various skeletal patterns, *Sensors*. A CBCT evaluation of nasal septal deviation and related nasofacial structures after maxillary skeletal expansion, *Applied Sciences*. A comparative evaluation of midfacial soft tissue and nasal bone changes with two maxillary protraction protocols: tooth-borne versus skeletal-anchored facemasks, *Orthodontics and Craniofacial Research*. A completely digital indirect bonding technique using a customized virtual orthodontic bracket setup and 3-dimensional printing technology, *American Journal of Orthodontics & Dentofacial Orthopedics*. A cone-beam computed tomography evaluation of posterior available space in both arches relative to various skeletal patterns, *American Journal of Orthodontics*

& *Dentofacial Orthopedics*. A conservative approach for an adult patient with a fractured tooth and crowding: autotransplantation at the fracture site, *American Journal of Orthodontics & Dentofacial Orthopedics*. A digital approach to the evaluation of mandibular position by using a virtual articulator, *The Journal of Prosthetic Dentistry*. A modified pontic appliance for treatment of impacted maxillary canines, *Journal of Clinical Orthodontics*. A retrospective CBCT study of the relationship between mandibular symphysis bone density and mandibular growth direction, *Journal of Clinical Pediatric Dentistry*. A staged expansion screw protocol to retract the premaxilla in BCLP infants with delayed nasolabial molding, *Journal of Clinical Pediatric Dentistry*. A surgery-first approach using single-jaw rotational mandibular setback in low-angle mandibular prognathism, *American Journal of Orthodontics & Dentofacial Orthopedics*. Addressing miniscrew-assisted rapid palatal expander complications, *American Journal of Orthodontics & Dentofacial Orthopedics*. Adjunctive surgery after total arch distalization to optimize esthetics, *APOS Trends in Orthodontics*. An interdisciplinary approach to orthodontic treatment of a mutilated Class III malocclusion with mini-implants, dental implants, and an autotransplant, *Journal of Esthetic and Restorative Dentistry*. An orthodontic treatment case of a TMD patient with maxillary posterior intrusion using TSADs, *Applied Sciences*. An overlay arch for maxillary and mandibular transverse discrepancies, *Journal of Clinical Orthodontics*. Authors' response, *American Journal of Orthodontics & Dentofacial Orthopedics*. Autotransplantation and alveolar bone regeneration, *American Journal of Orthodontics & Dentofacial Orthopedics*. Autotransplanted premolars with incomplete root formation in a growing patient with multiple missing teeth, *American Journal of Orthodontics & Dentofacial Orthopedics*. Biomechanical analysis for total arch distalization according to location of force application and types of temporary skeletal anchorage devices, *Clinical Journal of Korean Association of Orthodontists*. Biomechanical analysis for total distalization of the maxillary dentition: a finite element study, *American Journal of Orthodontics & Dentofacial Orthopedics*. Biomechanical analysis for total mesialization of the maxillary dentition: a finite element study, *American Journal of Orthodontics & Dentofacial Orthopedics*. Biomechanical analysis of the maxillary molar intrusion: a finite element study, *American Journal of Orthodontics & Dentofacial Orthopedics*. Biomechanical considerations for total distalization of the mandibular dentition in the treatment of Class III malocclusion, *Seminars in Orthodontics*. Biomechanical considerations for total distalization of the maxillary dentition using TSADs, *Seminars in Orthodontics*. Bone density measurements: multi-slice computed tomography versus cone-beam computed tomography, *Clinical Journal of Korean Association of Orthodontists*. Case report: how would you treat this malocclusion? *PCSO Bulletin*. Centric occlusion-centric relation conversion of a lateral cephalogram, *American Journal of Orthodontics & Dentofacial Orthopedics Clinical Companion*. Cephalometric and model evaluations after molar distalization using modified C-palatal plates in patients with severe arch length discrepancy, *American Journal of Orthodontics*

& *Dentofacial Orthopedics*. Class II division 1 adolescent treatment with twin block and fixed orthodontic appliances: 3-dimensional changes of the temporomandibular joint, *Journal of Clinical Pediatric Dentistry*. Clear aligner therapy in contemporary orthodontics, *American Journal of Orthodontics & Dentofacial Orthopedics*. Clear aligner treatment education in dental schools in the United States and Canada, *Journal of Clinical Orthodontics*. Clinical application of a maximum intercuspal position-centric relation occlusion conversion of a lateral cephalogram in the treatment of orthodontic patients, *American Journal of Orthodontics & Dentofacial Orthopedics*. Clinical considerations when treating impacted maxillary central incisors, *American Journal of Orthodontics & Dentofacial Orthopedics*. Closure of anterior spacing with well-positioned incisors: strategic molar protraction for long-term stability, *American Journal of Orthodontics & Dentofacial Orthopedics*. Comparison of facial esthetic standards between Latin American and Asian populations using 3D stereophotogrammetric analysis, *Journal of the World Federation of Orthodontists*. Comparison of the effects of horizontal and vertical micro-osteoperforations on the biological response and tooth movement in rabbits, *Korean Journal of Orthodontics*. Comparison of treatment effects after total mandibular arch distalization with miniscrews vs ramal plates in patients with Class III malocclusion, *American Journal of Orthodontics & Dentofacial Orthopedics*. Comparison of treatment effects from total arch distalization using modified C-palatal plates versus maxillary premolar extraction in Class II patients with severe overjet, *Orthodontics and Craniofacial Research*. Continuing in the fine tradition, *American Journal of Orthodontics & Dentofacial Orthopedics*. Control of the occlusal plane in orthognathic surgery, *American Journal of Orthodontics & Dentofacial Orthopedics*. Correction of an adult Class III malocclusion through regaining of orthodontic space and implant restoration, *Journal of Esthetic and Restorative Dentistry*. Correction of severe bimaxillary protrusion with first premolar extractions and total arch distalization with palatal anchorage plates, *American Journal of Orthodontics & Dentofacial Orthopedics*. Cortical bone thickness and bone density effects on miniscrew success rates: a systematic review and meta-analysis, *Orthodontics and Craniofacial Research*. Craniomaxillofacial changes using high-pull J-hook headgear and mini-implant anchorage in adolescents: a structural superimposition method, *Journal of Clinical Pediatric Dentistry*. Creation of digital virtual patient by integrating CBCT, intraoral scan, 3D facial scan: an approach to methodology for integration accuracy, *Journal of Craniofacial Surgery*. Dental and skeletal effects after total arch distalization using modified C-palatal plate on hypo- and hyperdivergent Class II malocclusions in adolescents, *Angle Orthodontist*. Distal movement of the mandibular dentition with temporary skeletal anchorage devices to correct a Class III malocclusion, *American Journal of Orthodontics & Dentofacial Orthopedics*. Distalization of maxillary molars using temporary skeletal anchorage devices: a systematic review and meta-analysis, *Orthodontics and Craniofacial Research*. Effect of extraction treatment on upper airway dimensions in patients with bimaxillary skeletal protrusion relative to their vertical skeletal pattern, *Korean*

Journal of Orthodontics. Effects of a mini-implant-assisted rapid palatal expansion on incisive canal morphology and tooth-canal relationship, *Applied Sciences*. Effects of bicortical anchorage on pterygopalatine suture opening with microimplant-assisted maxillary skeletal expansion, *American Journal of Orthodontics & Dentofacial Orthopedics*. Evaluating mandibular symphysis bone density according to various skeletal patterns with CBCT, *Orthodontics and Craniofacial Research*. Evaluation of mandibular position for splint therapy using a virtual articulator, *Journal of Clinical Orthodontics*. Evolution of the American Board of Orthodontics scenario-based clinical examination, *American Journal of Orthodontics & Dentofacial Orthopedics*. Facemask therapy with skeletal anchorage: a possible alternative to orthognathic surgery, *Orthodontics and Craniofacial Research*. Factors associated with the maxillary third molar position after total arch distalization using a modified C-palatal plate in adolescents, *Orthodontics and Craniofacial Research*. Finite element analysis of C-expanders with different vertical vectors of anchor screws, *American Journal of Orthodontics & Dentofacial Orthopedics*. Gummy smile: its etiology and treatment options, *American Journal of Orthodontics & Dentofacial Orthopedics*. Hemimandibular hyperplasia treatment with condylectomy and orthodontic camouflage treatment using miniplate, *American Journal of Orthodontics & Dentofacial Orthopedics*. How would you treat this malocclusion? *PCSO Bulletin*. Implementation of teledentistry for orthodontic practices, *Journal of the World Federation of Orthodontists*. Improved facial profile with non-extraction treatment of severe protrusion using TSADs, *Seminars in Orthodontics*. Informed consent for two-phase orthodontic treatment, *Journal of Clinical Orthodontics*. Integrating autotransplantation into the orthodontic treatment of an adolescent patient with mutilated dentition, *American Journal of Orthodontics & Dentofacial Orthopedics*. Interlabial gap and freeway space at rest position: a cephalometric study, *Australian Orthodontic Journal*. Long-term CBCT evaluation of mandibular third molar changes after distalization in adolescents, *Applied Sciences*. Long-term changes of anterior alveolar bone after treatment with mandibular molar distalization, evaluated with cone-beam computed tomography, *American Journal of Orthodontics & Dentofacial Orthopedics*. Long-term evaluation of maxillary molar position after distalization using modified C-palatal plates in patients with and without second molar eruption, *American Journal of Orthodontics & Dentofacial Orthopedics*. Maxillary incisor position-based orthodontic treatment with miniscrews, *Seminars in Orthodontics*. New definition for relating occlusion to varying conditions of the temporomandibular joint: conditions of the temporomandibular joint orthodontists need to know, *American Journal of Orthodontics & Dentofacial Orthopedics*. New orthopedic and orthodontic treatment modality for adult patients with skeletal Class III malocclusion with insufficient maxillary incisor exposure, *American Journal of Orthodontics & Dentofacial Orthopedics*. Non-extraction camouflage treatment using extra-alveolar skeletal anchorage, *Australasian Orthodontic Journal*. Nonsurgical correction of anterior crossbite with extra-radicular miniscrews: a case report, *Applied Sciences*. Nonsurgical maxillary expansion in a 60-year-old patient with gingival recession and crowding, *Korean Journal of Orthodontics*. Occlusal build-ups

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Virtual reality simulation as an educational tool

By Katie Hubbard

Hanan Omar, BDS, PhD, MSc, is keeping an eye on the future of education. The professor and assistant dean for research at A.T. Still University's Missouri School of Dentistry & Oral Health has a strong interest in educational technology and regularly publishes articles on the topic, including online experiences, educational videos, and virtual reality. Her recent project, "The Effectiveness of Virtual Reality Simulation as an Educational Tool for Intraoral Radiography and Local Anesthesia," combines virtual reality with clinical procedures to improve student learning.

To begin this project, Dr. Omar used funding from ATSU's Highly Flexible Learning Options Using Technology Grant award to purchase several sets of Meta Quest 2, a virtual reality headset with hand controls. With a group of 20 students, she split participants into two projects: local anesthesia (Project A) and intraoral radiography (Project B). She then gave each student a Meta Quest 2 set to practice their respective project simulations on a virtual patient.

The anesthesia and radiography software used on Meta Quest 2 includes presentations for students to watch before practicing the procedures. Once they finish practicing, they go into test mode where

the software grades them on how they performed. Students keep performing procedures in test mode until they score 100%. After students score 100% on their respective procedures, Dr. Omar distributes a perception questionnaire about their experience with the virtual reality simulations.

"I don't dictate the amount of time students have to use the software," Dr. Omar says. "Students are able to use this technology and software until they feel comfortable and confident performing these procedures."

Currently, Dr. Omar is in the second phase of her project where the students are completing procedures on simulators in the simulation clinic as part of their curriculum.

Next, she will ask students who used the virtual reality software to describe how it affected their learning. If results indicate students felt they performed better after using the virtual reality software, Dr. Omar will conduct an objective structured clinical examination.

In addition, with local anesthesia procedures, Dr. Omar will instruct students who did and did not practice with virtual reality simulation to administer an injection using simulators in the simulation clinic.

She will then document how many times it takes students to complete the procedure accurately with the correct technique.

"The software is designed so the movement students do with their hand controller is exactly the same distance and type of movement they will do when they give anesthesia to a manikin or human patient," Dr. Omar says. "The whole educational theory is if you repeat a movement or action at the same distance, it will become muscle memory, making it easier to administer that procedure the same way every time."

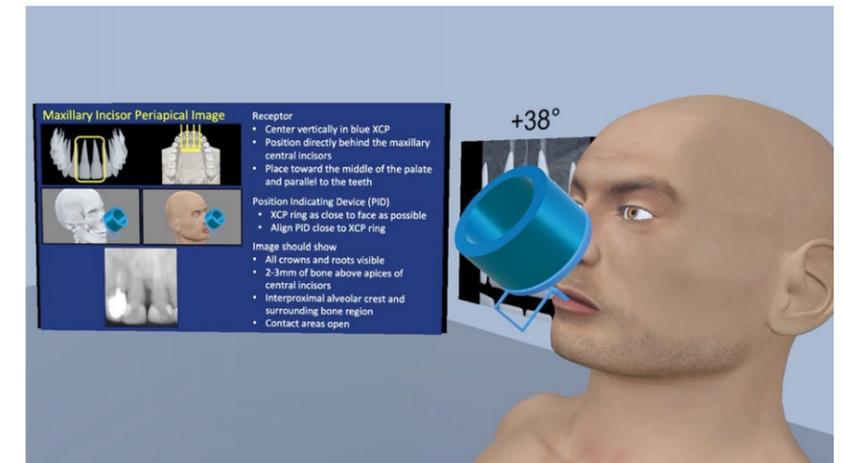
With intraoral radiographs, students will practice capturing the correct images, including adjusting angles, selecting the right tool for specific radiographs, and mounting the images in a full-mouth radiograph screen.

Dr. Omar says virtual reality learning opportunities are important for students, especially during situations like a pandemic when real patients are not physically available. These opportunities are also important to help with various paces of learning, since students learn in different ways and at different rates.

"These options won't replace traditional learning," Dr. Omar says, "but they will complement traditional learning."



Using Meta Quest 2 headsets and hand controllers, students practice anesthesia and radiography techniques virtually on simulated patients.



These are examples of the virtual reality software students see when performing simulated procedures.



FACULTY and STAFF SCHOLARLY ACTIVITY (September 2020-December 2022)

borne anchorage in growing patients with Class III malocclusion, *American Journal of Orthodontics & Dentofacial Orthopedics*. Treatment of a high angle protrusion case optimized with interdisciplinary approaches and TSADs, *American Journal of Orthodontics & Dentofacial Orthopedics*. Treatment of transposed canines and first premolars using miniscrew anchorage, *Journal of Clinical Orthodontics*. Trends in the choice of a clinician for orthodontic treatment in the United States, *American Journal of Orthodontics & Dentofacial Orthopedics*. Trends in the use of 3D printing technology among practicing orthodontists and orthodontic residency programs, *Journal of Clinical Orthodontics*. TSADs special issue, *Orthodontics and Craniofacial Research*. Twin study: genetic comparison of matrix versus intramatrix rotation in the mandible and three different occlusal planes, *Progress in Orthodontics*. Understanding of making of 3-dimensional facial image, *Clinical Journal of Korean Association of Orthodontists*. Use of artificial intelligence to predict outcomes of nonextraction treatment of Class II malocclusions, *Seminars in Orthodontics*. Use of temporary skeletal anchorage devices for intrusive root movement of maxillary incisors in adult patients with Class II Division 2 malocclusion, *American Journal of Orthodontics & Dentofacial Orthopedics*. Vertical bony step between proximal and distal segments after mandibular setback is related with relapse: a cone-beam computed tomographic study, *American Journal of Orthodontics & Dentofacial Orthopedics*. Presentations/abstracts: Accuracy of AI-assisted growth prediction model using diverse malocclusion cases with longitudinal follow-up. Accuracy, reliability, and clinical feasibility of AI-assisted remote orthodontic tooth monitoring technology. Anterior open bite correction: conventional treatment vs. TADs. Anterior open bite correction: surgery vs TADs. Class II correction with maxillary distalization and TADs. Clinical applications of TADs in contemporary orthodontics. Deep bite correction with TADs. Going viral: COVID effects on education, patient care, and recruitment. Orthodontic assistant retention: which office benefit has the best prognosis for maintaining orthodontic staff? Orthodontic journals with impact factors. Orthognathic surgery vs. TADs in contemporary orthodontics. Updates from the National Dental Practice-Based Research Network, Funding: NIH/NIDCR-U19-DE-028717, NIH/NIDCR-U01-DE-028727. Vertical and sagittal correction with TADs.

Patel, S. Publications: Thinking outside the tooth: diagnosis and management of patients with neuropathic orofacial pain, *Dental Clinics of North America*. Presentations/abstracts: Fluoride compliance and caries incidence among patients undergoing radiation therapy.

Paz, D. Publications: Clinical case and assessment databases in periodontology created from virtual clinic rotation, *Journal of Dental Education*.

Pedapati, C. Presentations/abstracts: Quantitative median nerve assessment at carpal tunnel among repetitive wrist use dental practitioners.

Perry, KB. Presentations/abstracts: A.T. Still University growing our own: innovative learning integration, community empowerment, integrated primary care, oral health and behavioral health. ATSU Dreamline Pathways™ Program: moving the dial—why downstream matters. Cultural proficiency: a way forward to a healthier Kansas. Health disparities during the COVID-19 era. Mantle of humanitarian leadership, her story. Mantle of servant leadership/professionalism. Missing at the table: exploring administrative pipeline gaps and solutions. Missing at the table: exploring administrative pipeline gaps and solutions part II. Peeling back the onion on substance abuse and revealing the challenges of those impacted. Transforming health through an equity driven approach.

Perry, M. Publications: Challenges experienced in the dental care of persons with special needs: a qualitative study among health professionals and caregivers, *BMC Oral Health*. Oral health care practice patterns for geriatric patients: an American Dental Association Clinical Evaluators Panel survey, *Journal of the American Dental Association*. Presentations/abstracts: Alpha and omega of teaching special care. Fluoride compliance and caries incidence among patients undergoing radiation therapy. Lesbian, gay, bisexual, transgender, queer, intersex, asexual, and other (LGBTQIA+) education in dental schools. Rose, bud, thorn, watching students bloom.

Peterson, S. Publications: A physical therapist-led clinical decision-making program reduced risk of adverse events after total knee arthroplasty over 3 years: a retrospective review, *Clinical Rehabilitation*. Alternating lumbar lateral shift: a case report, *Journal of Manual and Manipulative Therapy*. An orthopedic manual physical therapy fellowship training's impact on professional development, involvement, personal lives, and income: a survey study, *Journal of Manual and Manipulative Therapy*. Continuing education courses for orthopedic and sports physical therapists in the United States often lack supporting evidence: a review of available intervention courses, *Physical Therapy*. How people with lumbar spinal stenosis make decisions about treatment: a qualitative study using the Health Belief Model, *Musculoskeletal Science and Practice*. Patient expectations for synchronous telerehabilitation visits: a survey study of telerehabilitation-naive patients, *Telemedicine and e-Health*. Physical therapy management of a patient with persistent groin pain after total hip arthroplasty and iliopsoas tenotomy: a case report, *Physiotherapy Theory and Practice*. The blind men, the elephant, and the continuing education course: why higher standards are needed in physical therapist professional development, *Journal of Orthopaedic and Sports Physical Therapy*. Presentations/abstracts: Clinical decision making program reduced risk of adverse events following total knee arthroplasty over 3 years.

Phillips, PL. Publications: Differential affinity chromatography reveals a link between Porphyromonas gingivalis-induced changes in vascular smooth muscle cell differentiation and the type 9 secretion system, *Frontiers in Cellular and Infection Microbiology*. Fetal growth restriction is a host specific response to infection with an impaired spiral artery

remodeling-inducing strain of Porphyromonas gingivalis, *Scientific Reports*. Presentations/abstracts: Anti-biofilm efficacy of 4 agents: a comparative study between 2 approaches. Cloning and expression of PG_RS02100 protein in Porphyromonas gingivalis. P. gingivalis T9SS and DPPs are linked to dysregulation of VSMC plasticity.

Picha, KJ. Publications: Athletic trainers' experiences working with athletes with a physical disability in school-based sports, *International Journal of Athletic Therapy and Training*. Educational technique: incorporating social determinants of health into athletic training education, *Athletic Training Education Journal*. Influence of limb dominance and shoulder injury on strength and explosive force in US Marines, *International Journal of Sports Physical Therapy*. Line hops and side hold rotation tests load both anterior and posterior shoulder: a biomechanical study, *International Journal of Sports Physical Therapy*. Low self-efficacy and high kinesophobia are associated with worse function in patients with femoroacetabular impingement syndrome, *Journal of Sport Rehabilitation*. Physical therapists' assessment of patient self-efficacy for home exercise programs, *International Journal of Sports Physical Therapy*. Social determinants of health: considerations for athletic health care, *Journal of Athletic Training*. Test-retest reliability and methodological considerations of the Sensory Organization Test in healthy young adults, *Athletic Training and Sports Health Care*. Presentations/abstracts: Athletic trainers' observations of social determinants of health in the secondary school setting. Athletic trainers' perceptions of and experience with social determinants of health in the collegiate and university setting. Athletic trainers' perceptions of and experiences with social determinants of health in the secondary school setting. Athletic trainers' perceptions of social determinants of health. Graduate students' use and perceptions of learning resources provided in a human anatomy course. Integrating social determinants of health into athletic training education. Observation of social determinants of health in athletic health care. Social determinants of health in athletic training education. Strategies for implementing team-based learning into a synchronous online graduate anatomy course. The relationships between early sports specialization, overuse injuries, and health-related quality of life in throwing athletes. Upper extremity injury history impacts current health related quality of life in collegiate baseball and softball athletes.

Pong, M. Presentations/abstracts: Admissions process: selecting the right students for a mission to serve.

Presley, M. Presentations/abstracts: Climate change inequities among rural American Indian communities. Long COVID's impact on Southwestern American Indian populations.

Quezada, C. Presentations/abstracts: Community centered approach to educating mothers on health-related topics. Effectiveness of educational events on osteopathic medicine awareness amongst healthcare workers at Family HealthCare Network. Virtual health and wellness program for elementary students.

Radziak, J. Presentations/abstracts: Orthotic fabrication for the general practitioner. Promoting field work in the Arizona community panel.

Ramaraj, P. Publications: Editorial: role of sex steroids and their receptor in cancers, *Frontiers in Endocrinology*. Presentations/abstracts: Effects of combo treatments of curcumin, vitamins and steroids. Is testosterone responsible for increased male mortality?

Rashid, S. Publications: A cross-sectional study of dental students perception of dental faculty gender differences, *PLoS One*. Efficacy of MI Paste® on bleaching-related sensitivity: randomized clinical trial, *International Journal of Dentistry*. Impact of brushing with charcoal on tooth color and enamel loss: an in vitro study, *American Journal of Dentistry*. Presentations/abstracts: COVID-19 and older adult's intention to visit the dentist. COVID-19 related clinical changes and student learning experience: student perspective. COVID-19 related clinical changes and student learning experience: a faculty perspective. In vitro impact of charcoal toothpaste brushing on tooth color and surface loss. Patient's caries risk and success of crowns placed by students.

Ratto, L. Presentations/abstracts: Assessment of LGBTQ knowledge and attitudes among health care student clinicians: a pilot study.

Reddy, AA. Publications: Impact of experiential learning on dental students' training in nitrous oxide inhalation sedation, *Journal of Dental Education*.

Robinson, B. Publications: Web-based standardized patient encounters for preclinical dental students during COVID-19 pandemic, *Journal of Dental Education*.

Roush, J. Publications: Agreement in walking speed measured using four different outcome measures: 6-meter walk test, 10-meter walk test, 2-minute walk test, and 6-minute walk test, *Internet Journal of Allied Health Sciences and Practice*. Using kinetic energy with potential energy when determining power during the stair climbing test, *Internet Journal of Allied Health Sciences and Practice*.

Roy, D. Publications: Accelerating use of self-measured blood pressure monitoring (SMBP) through clinical-community care models, *Journal of Community Health*. Are community health center patients interested in self-measured blood pressure monitoring (SMBP): and can they do it? *Integrated Blood Pressure Control*. Impact of COVID-19-related care disruptions on blood pressure management and control in community health centers, *BMC Public Health*. Presentations/abstracts: Addressing barriers to osteopathic medical students obtaining research. Association between cognitive test anxiety scale and poor COMSAE Phase 1 scores.

Ruotolo, A. Publications: Perceived benefits of the AuD degree among Canadian audiologists, *Canadian Audiologist*.

Sackett, D. Publications: Effect of a required online graded curriculum in the clerkship years on medical student national standardized examination performance, *Journal of Osteopathic Medicine*. Presentations/abstracts: Online clerkship curriculum enhances student performance on national standardized examinations.

Salas-Provence, MB. Publications: Higher education leaders' framing of organizational decisions during COVID-19, *Journal of Allied Health*. Managing in a crisis: American and Peruvian professionals' experiences during COVID-19, *Perspective of the ASHA Special Interest Groups*. Presentations/abstracts: Leading graduate program innovation: creating educational connections for a diverse student experience.

Sauers, E. Publications: Meeting personal health care needs in primary care: a response from the athletic training profession, *Athletic Training Education Journal*.

Schneider, R. Publications: Interprofessional approach to learning vascular access with ultrasonography by medical students and nurses, *Missouri Medicine*. The myodural bridge of the American alligator (*Alligator mississippiensis*) alters CSF flow, *Journal of Experimental Biology*. Variations in the cerebrospinal fluid dynamics of the American alligator (*Alligator mississippiensis*), *Fluids and Barriers of the CNS*.

Schroeder, K. Publications: Web-based standardized patient encounters for preclinical dental students during COVID-19 pandemic, *Journal of Dental Education*.

Sengchannavong, A. Presentations/abstracts: Health education video development: improving health literacy in Afghan refugees to better navigate the US pharmacy system.

Sexton, PS. Publications: A behavioural and social sciences core curriculum for Egyptian undergraduate medical education at the Armed Forces College of Medicine, *The Egyptian Journal of Medical Education*. Online medical education in Egypt during the COVID-19 pandemic: a nationwide assessment of medical students' usage and perceptions, *BMC Medical Education*. Status of Entrustable Professional Activities (EPA) implementation at colleges of osteopathic medicine in the United States and future considerations, *Journal of the American Osteopathic Association*. Presentations/abstracts: Professional development in medical education: opportunities for growth.

Sexton, WL. Presentations/abstracts: Carbonic anhydrase inhibition does not affect fatigue or force generation. Measurement of intravascular PO2 in the rat kidney: proof of concept.

Shanahan, C. Presentations/abstracts: Approaches to nutritional health awareness and first aid in students with special needs. Mental health workshops with high school students.

Shearon, T. Presentations/abstracts: Orthotic fabrication for the general practitioner. Yoga for optimal pelvic health and wellness.

Shipley, T. Publications: Herpes simplex virus 1 as an oncolytic viral therapy for refractory cancers, *Frontiers in Oncology*.

Shlossman, M. Presentations/abstracts: Dental students' perceptions and preparedness to counsel patients about e-cigarette use and vaping. Effect of diode laser therapy on periodontal parameters in maintenance patients. Efficacy of ClōSYS® anticavity toothpaste and GentleMINT rinse regimen on plaque, gingival inflammation and bleeding upon probing. Gingival health status of

children and adolescent juvenile offenders: a periodontal needs assessment. Salivary pH and buffering change following use of pHighter Mint™.

Shoup, D. Publications: Polytrauma: managing PTSD and comorbid pain in veterans, *Psycom Pro*. Performance arts medicine: musculoskeletal dance injuries and pain management techniques, *Practical Pain Management*.

Silva, H. Presentations/abstracts: A new and innovative model between community health and an academic dental institution: addressing oral health disparities of US veterans through community and academic partnerships. ATSU-MOSDOH Smiles for Veterans program.

Singh, V. Publications: Expression of Staphylococcal virulence genes in situ in human skin and soft tissue infections, *Antibiotics*. Regulation of the Sae two-component system by branched-chain fatty acids in *Staphylococcus aureus*, *mBio*. The role of process-directing agents on enamel lesion remineralization: fluoride boosters, *Biomimetics*. Presentations/abstracts: Effects of inulin on intestinal barrier function in a Caco-2 cell monolayer model of intestinal barrier. Expression of ATP synthase encoding genes. Inulin protects intestinal epithelial cells from LPS-induced inflammation. Inulin protects intestine from LPS induced gut barrier damage. Lack of DnaK and MsrA1 proteins and reduced stress tolerance in the bacterium. Lack of MsrA activity reduced *S. aureus* pathogenesis in murine abscess model. Vitamin D3 prevents LPS-induced apoptosis and proliferation in IECs.

Sivakoff, M. Presentations/abstracts: COVID-19 vaccine hesitancy amongst adult patients at Adelante Healthcare in Maricopa County, AZ. Evaluating health knowledge, literacy, and activity levels of elementary students through the Nutrition and Health Awareness program. Preparing for pandemics: lesson plan design for elementary-aged children.

Skinner, K. Publications: Audiology, an important contributor to interprofessional holistic care: an interprofessional collaborative case example, *American Journal of Audiology*. Presentations/abstracts: Aging effects on a concurrent and sequential dual-task paradigm.

Smith, K. Presentations/abstracts: AHEC Scholars: addressing health workforce shortages.

Snider, KT. Publications: Characteristics and management of pregnant patients from a neuromusculoskeletal medicine/osteopathic manipulative medicine clinic, *Journal of the American Osteopathic Association*. Characteristics and treatment of geriatric patients in an osteopathic neuromusculoskeletal medicine (ONMM) clinic, *Journal of Osteopathic Medicine*. Effects of osteopathic manipulation and other manual manipulative treatments on cystic fibrosis, *American Academy of Osteopathy Journal*. Impact of osteopathic manipulative techniques on the management of dizziness caused by neuro-otologic disorders: protocol for systematic review and meta-analysis, *International Journal of Osteopathic Medicine*. Presentations/abstracts: Cranial somatic dysfunction. Evening with the FAAOs and FAOASMs: insights on the management of common occupational and sports injuries.

Please note: Peer-reviewed journal publications, presentations, and abstracts are included as reported in the Fall 2020 through Supplement 2022 *ATSU Research* newsletters, prepared by Research Support. Individuals listed were full-time and part-time ATSU faculty and staff members at the time publications, presentations, or abstracts were self-reported to Research Support.

Please note: Peer-reviewed journal publications, presentations, and abstracts are included as reported in the Fall 2020 through Supplement 2022 *ATSU Research* newsletters, prepared by Research Support. Individuals listed were full-time and part-time ATSU faculty and staff members at the time publications, presentations, or abstracts were self-reported to Research Support.

FACULTY and STAFF SCHOLARLY ACTIVITY (September 2020-December 2022)

Impact of osteopathic manipulative techniques on the management of dizziness caused by neuro-otologic disorders: systematic review and meta-analysis. Integrating scholarly activity into a crowded osteopathic recognition curriculum. Supporting osteopathic recognition with scholarship opportunities. Introduction to systematic approaches to OMM. Korr's approach to geriatrics. Korr's osteopathic approach to geriatrics. Northup Memorial Lecture – integrating osteopathic principles into patient care: an approach for all specialties. Osteopathic approach to newborn feeding disorders. Osteopathic approach to OMM for the size disadvantaged physician. Osteopathic approach to pneumonia. Osteopathic approach to tension headaches. Osteopathic approach to the newborn. Overcoming barriers to performing OMM. Systematic approaches to OMM.

Snyder Valier, AR. Publications: A descriptive and comparative analysis of injuries reported in USA Cycling-sanctioned competitive road cycling events, *Injury Epidemiology*. Athletic trainers' experiences working with athletes with a physical disability in school-based sports, *International Journal of Athletic Therapy and Training*. Characterizing athletic healthcare: a perspective on methodological challenges, lessons learned, and paths forward, *Front Sports Act Living*. Concurrent validity of the Concussion Quality of Life-Youth patient-report outcome measure (version 1), *Brain Injury*. Educational technique: incorporating social determinants of health into athletic training education, *Athletic Training Education Journal*. Evaluating multiple domains of health in high school athletes with sport-related concussion, *Journal of Sport Rehabilitation*. Exploring parent-athlete dyads' perceptions of sports specialization and sport experiences in an early youth community-based sport program, *Orthopaedic Journal of Sports Medicine*. Health-related quality of life in former Division II collegiate athletes using the Disablement of the Physically Active Scale, *Athletic Training and Sports Health Care*. High school athletes' health-related quality of life across recovery after sport-related concussion or acute ankle injury: a report from the Athletic Training Practice-Based Research Network, *Orthopaedic Journal of Sports Medicine*. Interpreting patient-rated outcome measures in adolescent patients following concussion, *Brain Injury*. Looking to improve your practice? Consider the science of quality improvement to get started, *Journal of Athletic Training*. Patient-reported outcome measures as an outcome variable in sports medicine research, *Frontiers in Sports and Active Living*. Physical therapists' assessment of patient self-efficacy for home exercise programs, *International Journal of Sports Physical Therapy*. Social determinants of health: considerations for athletic health care, *Journal of Athletic Training*. Presentations/abstracts: An examination of youth sport specialization patterns and perceptions between developmental stages and competitive contexts. Athletic trainers' observations of social determinants of health in the secondary school setting. Athletic trainers' perceptions of and experience with social determinants of health in the collegiate and university setting. Athletic trainers' perceptions of and experiences with social determinants of health in the secondary school setting. Athletic

trainers' perceptions of social determinants of health. Clinical evaluation findings in patients diagnosed with deltoid ligament ankle sprains: a report from the Athletic Training Practice-Based Research Network. Concurrent validity of the Concussion Quality of Life-Youth patient-reported outcome measure (version 1). Descriptive report of injuries sustained by secondary school baseball players categorized by level of community socioeconomic status. Evaluating multiple domains of health in high school athletes with sport-related concussion. Exploring parent-athlete dyads' perceptions of sports specialization and sport experiences in an early youth community-based sport program. Injury and treatment characteristics of sport-specific injuries from 2013-2020: a report from the Athletic Training Practice-Based Research Network. Mapping adolescent athletes' perceptions of activity limitations following sport-related concussion to the International Classification of Functioning, Disability, and Health. Observation of social determinants of health in athletic health care. Relationships between hip, thoracolumbar and glenohumeral ranges of motion in Division I collegiate baseball players. Social determinants of health in athletic training education. Strength and range of motion differences at the hip, thoracolumbar, and glenohumeral joints between Division I and Division III baseball players. Test-retest reliability and concurrent validity of the Concussion Quality of Life-Youth patient-report outcome measure. Use of region-specific patient-reported outcome measures by athletic trainers.

Speer, JE. Publications: A mixed-methods study of the effectiveness and perceptions of a course design institute for health and science educators, *BMC Medical Education*. Creation of a novel biomedical engineering research course for incarcerated students, *Biomedical Engineering Education*. Development of a library of laminin-mimetic peptide hydrogels for control of nucleus pulposus cell behaviors, *Journal of Tissue Engineering*. Gains and losses in virtual mentorship: a descriptive case study of undergraduate mentees and graduate mentors in STEM research during the COVID-19 pandemic, *CBE-Life Sciences Education*. Presentations/abstracts: Bridging the health disparities divide: measuring cultural proficiency development in graduate health science students. Development and implementation of an engineering research course for a college-in-prison program. Teaching essential course design skills: investigation of a professional development opportunity for health science educators. Virtual research mentoring between graduate and undergraduate students during the COVID-19 pandemic.

Spolarich, A. Presentations/abstracts: 6-Month smiles: stage I/II periodontitis protocols for patient improvement. Alpha and omega of teaching special care. Assessing patient perceptions about dental experiences and teledentistry in the emergency department. Clinical pearls for managing the medicated medically complex patient. Correlation between BMI and caries risk. Dental student attitudes towards gaming for evidence-based dentistry. Dental student stress and coping. Dental students' perceptions and preparedness to counsel patients about e-cigarette use and vaping.

Do-it-yourself orthodontics consumer survey. Effect of apical patency on hypochlorite extrusion in a negative pressure system. Efficacy of ClōSYS® anticavity toothpaste and GentleMINT rinse regimen on plaque, gingival inflammation and bleeding upon probing. Evaluating antibiotic prophylaxis protocols for the prevention of dental implant failure. Fluoride compliance and caries incidence among patients undergoing radiation therapy. Have a heart: practical advice for caring for patients with heart disease. Nasotracheal intubation vs nasopharyngeal (open) airway: understating dental provider preferences. Oral health care and malocclusion in children with autism spectrum disorder. Patient experiences and willingness to use teledentistry in emergency departments. Pharmacologic management of the geriatric patient: practical advice and current considerations. Putting the mouth back in the body: how oral health affects whole patient care. Relationship between apical patency and irrigant fluid extrusion. Risk and benefits of dietary supplement use. Risk factors for infectious flare-ups after endodontic treatment. Salivary pH and buffering change following use of pHighter Mint™. The impact of COVID-19 on food insecurity and oral health in America. The P4 approach to patient-centered oral healthcare: empowering our patients. Who are the long haulers? Working together: cardiologist and dental hygienist address antibiotic prophylaxis for heart disease.

Stanfield, B. Presentations/abstracts: Variability in researcher dependent data collection, rat behavioral testing.

Starks, Z. Presentations/abstracts: Advancing the measurement of rib cage excursion in females. Comparison of outcomes of diagnostic palpation training delivery methods. Correlation of surface topography volume and spirometry tidal volume. Diagnostic palpatory force asymmetries persist throughout OMM training. Does experience affect diagnostic palpatory force? Effect of objective training on asymmetry assessments of the pelvis. Effects of osteopathic manual treatment and acupuncture on TBI symptoms. Examiners' perception does not agree with objective stiffness measures during the ASIS compression test. Improvements in volume measurements with the DIERS formetric 4D. Objective force palpation feedback using force pad technology. Practice makes improvement: training accurate force delivery to spine models. Reducing diagnostic palpatory force variability after 8-weeks of training with objective feedback. Surface topography to measure respiratory mechanics: a pilot study.

Story, A. Presentations/abstracts: Building allies from the community.

Straight, B. Presentations/abstracts: Review on stretching post exercise.

Stuart, MK. Publications: Cytokine array analysis of mediators produced by human macrophages stimulated with *Trichomonas tenax*, *Experimental Parasitology*. Presentations/abstracts: A take-home immunology wet lab exercise. Characterization of polarized macrophage-melanoma cell interactions. Evidence of transovarial transmission of *Ehrlichia chaffeensis* in *Amblyomma americanum* (Acari: Ixodidae).

Fetal bovine serum induces chemotaxis and chemokinesis by *Trichomonas tenax*.

Stull, C. Presentations/abstracts: Effects of osteopathic manual treatment and acupuncture on TBI symptoms.

Tanguma-Gallegos, A. Presentations/abstracts: Community connection: a compelling approach to teach opioid overdose prevention and harm reduction. Community health center-based interprofessional training and practice: the Buena Vida (good life) pain clinic's integrated approach to addressing patient, provider, student and community needs.

Taylor, C. Presentations/abstracts: Dermoscopy: identifying melanocytic lesions.

Thomas, S. Presentations/abstracts: Climate change inequities among rural American Indian communities. Long COVID's impact on Southwestern American Indian populations.

Thompson, J. Publications: Dental anesthesia for medical providers: a novel interprofessional course, *The Journal of Physician Assistant Education Association*.

Tibben, T. Presentations/abstracts: Dermatology disparities: visual representation is key. Increasing heat safety awareness for Arizonians experiencing homelessness.

Tidman, MM. Publications: Causes of medication error in nursing, *Journal of Medical Research and Health Sciences*. Effects of a ketogenic diet on symptoms, biomarkers, depression, and anxiety in Parkinson's disease: a case study, *Cureus*. Effects of a low carbohydrate/healthy fat/ketogenic diet on biomarkers of health and symptoms, anxiety and depression in Parkinson's disease: a pilot study, *Neurodegenerative Disease Management*. Physical exercise versus intensive balance programs: a review of the effects exercise has on balance for patients with TBI and use of the BESS, *Journal of Exercise Physiology Online*.

Tomeh, H. Publications: Self-motivation and self-direction in team-based and case-based learning, *Journal of Dental Education*. Presentations/abstracts: Evaluation of polishing systems for CAD/CAM polymer infiltrated ceramic network restoration. Lifting EBD from theory to practice—into our clinics.

Traylor, D. Publications: COVID-19 and communities of color: understanding the impact of racism on public health, *Nevada Journal of Public Health*. Stress and coping among American Indian/Alaska Natives in the age of COVID-19, *American Indian Culture and Research Journal*. The transtheoretical stages of change model: a tool to predict PrEP prescribing by Southern US primary care providers, *Journal of the Student National Medical Association*. Presentations/abstracts: COVID-19: stress and coping in communities of color. PrEP prescribing by Southern US primary care providers. Resilience in research: embracing novel approaches to conducting research in the age of COVID-19. Stress and coping with remote schooling during COVID-19. Stress and coping: African Americans during COVID-19. The use of the transtheoretical stages of change model (TTM) to predict PrEP prescribing by Southern US primary care providers. Women's perceived stressors and coping during COVID-19.

Trombly, C. Publications: Dental anesthesia for medical providers: a novel interprofessional course, *The Journal of Physician Assistant Education Association*. Presentations/abstracts: IPE from the classroom to practice.

Trombly, R. Publications: Dental education in the time of COVID-19 and beyond, *Compendium of Continuing Education in Dentistry*. Presentations/abstracts: Diversity in dental workforce, where we are and where we ought to be.

Tshuma, L. Publications: Essential integrated behavioral health care skills for primary care providers, *Families, Systems & Health*. "I can't breathe": courageous conversations and responses to racism in physician assistant education, *The Journal of Physician Assistant Education Association*. Presentations/abstracts: A way forward: a roadmap for diversity, equity, and inclusion. Addressing opioid use disorders in diverse communities: finding the you in OUD solutions! Better together: occupational therapists in primary care integrated behavioral health teams. Caring for integrated care teams and trainees: imposter syndrome and burnout in an evolving healthcare paradigm. Caring for our community: OUD/SUD readiness and response in the time of need. Chronic pain and Buena Vida! (good life!) Community connection: a compelling approach to teach opioid overdose prevention and harm reduction. Community health center-based interprofessional training and practice: the Buena Vida (good life) pain clinic's integrated approach to addressing patient, provider, student and community needs. Community health center-based interprofessional training and practice: developing master adaptive learners through integrated care quality improvement. Cultivating the next generation of physician champions for integrated care. Essential integrated care skills for medical providers. Huddle up! The interprofessional team at its best. Identifying core competencies for primary care medical providers practicing integrated behavioral health. Identifying essential skills for integrated behavioral health: a Delphi survey with the AAFP National Research Network. Impacting communities through osteopathic education: CHC partnerships for integrated care. Integrated behavioral health education for trainees, faculty, and providers: transforming lives and communities with our nation's health centers. Integrated behavioral health medical education partnerships in diverse communities. Integrated care capacity building: essential skills for primary care providers. Integration pathways for providers: preceptor development redesigned! It takes a village: keys to pain management success in a diverse Hawaiian community. Leveraging the DEI toolkit to promote inclusive practices in PA education. Physician workforce development: cultivating the next generation of physician champions for integrated care. Preceptor development redesigned: a novel integrated behavioral health workforce education approach. Preceptor development redesigned: the model of improvement, the opioid crisis and integrated care. Toward health equity: social determinants of health and PA education. Transforming lives and communities with our nations' health centers: behavioral health education for trainees, faculty and clinical providers.

Valovich McLeod, TC. Publications: Adolescent athletes' perspectives on the social implications of sport-related concussion, *Internet Journal of Allied Health Sciences and Practice*. An examination of perceived pressure from stakeholders on concussion reporting intentions and behavior in ice hockey athletes, *Journal of Head Trauma Rehabilitation*. Athletic administrators' reporting of emergency preparedness regarding policies and procedures in lowa secondary schools, *Journal of Athletic Training*. Characteristics of burnout among collegiate and secondary school athletic trainers: a systematic review, *Athletic Training and Sports Health Care*. Characteristics of injuries occurring during cross-country: a report from the Athletic Training Practice-Based Research Network, *Journal of Athletic Training*. Characterizing athletic healthcare: a perspective on methodological challenges, lessons learned, and paths forward, *Front Sports Act Living*. Concurrent validity of the Concussion Quality of Life-Youth patient-report outcome measure (version 1), *Brain Injury*. Do cognitive behavioral therapy techniques reduce symptom duration in children and adolescents who have sustained a mild traumatic brain injury? *International Journal of Athletic Therapy and Training*. Early sport specialization in college athletes and the impact on health-related quality of life: a critically appraised topic, *Journal of Sport Rehabilitation*. Establishing reliability of a reaction time testing battery in high school athletes, *Athletic Training and Sports Health Care*. Evaluating multiple domains of health in high school athletes with sport-related concussion, *Journal of Sport Rehabilitation*. Exploring parent-athlete dyads' perceptions of sports specialization and sport experiences in an early youth community-based sport program, *Orthopaedic Journal of Sports Medicine*. Going beyond the state law: investigating high school sport-related concussion protocols, *Journal of Athletic Training*. High school athletes' health-related quality of life across recovery after sport-related concussion or acute ankle injury: a report from the Athletic Training Practice-Based Research Network, *Orthopaedic Journal of Sports Medicine*. How strong is the evidence supporting shoulder injury risk factors in adolescent overhead sport athletes? *Athletic Training and Sports Health Care*. Interpreting patient-rated outcome measures in adolescent patients following concussion, *Brain Injury*. Pain education with therapeutic exercise in chronic nonspecific low back pain rehabilitation: a critically appraised topic, *Journal of Sport Rehabilitation*. Patient-reported outcome measures as an outcome variable in sports medicine research, *Frontiers in Sports and Active Living*. Patient-reported outcome measures for pediatric patients with sport-related injuries: a systematic review, *Journal of Athletic Training*. Patient-reported outcomes following vestibular rehabilitation on concussion-induced vertigo: a critically appraised paper, *International Journal of Athletic Therapy and Training*. Pediatric healthcare provider awareness, confidence, and use of sports specialization recommendations and application towards youth athlete counseling, *Orthopaedic Journal of Sports Medicine*. Quality improvement: implementation of individualized concussion patient education and rehabilitation treatment plans, *Clinical Practice in Athletic Training*. Supporting students after a concussion: school administrators' perspectives, *Perspectives in Learning*. Teachers' perceived knowledge and confidence regarding adolescent concussion management, *Journal*

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FACULTY and STAFF SCHOLARLY ACTIVITY (September 2020-December 2022)

of Education and Learning. The ability of baseline and normative neurocognitive testing to identify cognitive impairments following concussion: a critically appraised topic, *International Journal of Athletic Therapy and Training.* The clinical practice characteristics, self-confidence, and barriers related to treatment following concussion among athletic trainers, *International Journal of Athletic Therapy and Training.* The growing influence of female athletic training scholars, *Journal of Athletic Training.* The influence of timing of reporting and clinic presentation on concussion recovery outcomes: a systematic review and meta-analysis, *Sports Medicine.* Vestibular and ocular/oculomotor assessment strategies and outcomes following sports-related concussion: a scoping review, *Sports Medicine.* Presentations/abstracts: An examination of youth sport specialization patterns and perceptions between developmental stages and competitive contexts. Case characterization and perceptions of athletic trainers regarding medical disqualification following concussion. Comparing academic challenges and quality of life in concussed adolescents prior to and during the COVID-19 pandemic. Concurrent validity of the Concussion Quality of Life-Youth patient-reported outcome measure (version 1). Development and validation of a novel concussion documentation audit tool. Development of the post-concussion collegiate return-to-learn protocol using a modified Delphi approach. Direct costs of care for adolescent patients with and without persisting concussion symptoms in United States secondary schools: a report from the Athletic Training Practice-Based Research Network. Evaluating multiple domains of health in high school athletes with sport-related concussion. Exploring parent-athlete dyads' perceptions of sports specialization and sport experiences in an early youth community-based sport program. Findings from the PRISM concussion RIG: does the 5P risk score predict persistent postconcussive symptoms in a multi-center sample of youth athletes. Higher student confidence in their schools' academic support associated with lower adverse academic concern following concussion. Injury and treatment characteristics of sport-specific injuries from 2013-2020: a report from the Athletic Training Practice-Based Research Network. Mapping adolescent athletes' perceptions of activity limitations following sport-related concussion to the International Classification of Functioning, Disability, and Health. Pediatric healthcare provider awareness, confidence, and use of sports specialization recommendations and applications towards youth athlete counseling. Pediatric healthcare provider knowledge and perceptions of sports specialization. Perceptions of academic concerns and performance ability among adolescents following a sport-related concussion. Reliability of a novel concussion documentation audit tool. Self-reported amnesia following concussion predicts greater deficits in quality of life domains among pediatric athletes. Taking an active approach to treating concussion. Test-retest reliability and concurrent validity of the Concussion Quality of Life-Youth patient-reported outcome measure. The influence of timing of reporting and clinic presentation on concussion recovery outcomes: a systematic review and meta-analysis. The relationships

between early sports specialization, overuse injuries, and health-related quality of life in throwing athletes. Understanding the patient perspective following sport-related concussion. Upper extremity injury history impacts current health related quality of life in collegiate baseball and softball athletes.

VanSickle, C. Publications: Did Neandertals have large brains? Factors affecting endocranial volume comparisons, *American Journal of Physical Anthropology.* Sexual dimorphism of the relationship between the gut and pelvis in humans, *Operative Dentistry.* Textbook typologies: challenging the myth of the perfect obstetric pelvis, *The Anatomical Record.* The immature Homo naledi ilium from the Lesedi Chamber, Rising Star Cave, South Africa, *American Journal of Biological Anthropology.* Presentations/abstracts: Effects of parturition and life stage on obstetric pelvic dimensions. Female pelvic dimensions at different ages in parous and nulliparous individuals. Variations of the cystohepatic blood supply in American Midwestern cadavers.

Vargo, R.J. Publications: A painful ulceration of the buccal mucosa, *Journal of the American Dental Association.* Addressing oral health barriers to care in head and neck cancer patients using a novel collaborative care approach, *Clinical Case Reports.* An asymptomatic swelling of the hard palatal mucosa, *Oral Surgery Oral Medicine Oral Pathology Oral Radiology.* Frankly invasive carcinoma ex-intraductal carcinoma: expanding on an emerging and perplexing concept in salivary gland tumor pathology, *Head and Neck Pathology.* Intraoral herniation of a sinonasal polyp: an underreported complication of maxillary extraction? *Journal of Oral and Maxillofacial Surgery.* Oral manifestations of syphilis: a review of the clinical and histopathologic characteristics of a reemerging entity with report of 19 new cases, *Head and Neck Pathology.* Presentations/abstracts: Oral lichenoid contact hypersensitivity reactions to cinnamon: a report of three cases.

Vetter, J. Publications: Informed consent for two-phase orthodontic treatment, *Journal of Clinical Orthodontics.*

Vij, A. Publications: Combination scan technique: an innovative approach to diagnosing altered passive eruption, *Journal of Cosmetic Dentistry.*

Wagner, R. Presentations/abstracts: Community health center-based interprofessional training and practice: the Buena Vida (good life) pain clinic's integrated approach to addressing patient, provider, student and community needs. Community health center-based interprofessional training and practice: developing master adaptive learners through integrated care quality improvement. Integration pathways for providers: preceptor development redesigned! Misinformation nation: examining COVID-19 vaccine hesitancy and misinformation among parents of pediatric patients. Pour some sugar on me: an analysis of diabetes telehealth follow-ups. Twists, turns, and blockages to colorectal screening follow-up.

Walker, C. Presentations/abstracts: Case report: periocular spasm.

Walsh, S. Publications: Treatment-resistant bipolar disorder managed with ketamine infusions as monotherapy, *Journal of the American Academy of Physician Assistants.*

Wang, YF. Presentations/abstracts: AHEC Scholars: addressing health workforce shortages. Comparison of outcomes of diagnostic palpation training delivery methods. Effect of objective training on asymmetry assessments of the pelvis. Effect of osteopathic manipulative treatment on infant insomnia. Impact of osteopathic manipulative techniques on the management of dizziness caused by neuro-otologic disorders: systematic review and meta-analysis. Practice makes improvement: training accurate force delivery to spine models. Surface topography to measure respiratory mechanics: a pilot study.

Warden, M. Publications: A mixed-methods study of the effectiveness and perceptions of a course design institute for health and science educators, *BMC Medical Education.* Presentations/abstracts: Correlation between BMI and caries risk. Teaching essential course design skills: investigation of a professional development opportunity for health science educators.

Watts, L. Presentations/abstracts: Hygiene and sanitation needs of people experiencing homelessness in Portland, OR. Provider preferences regarding the benefits and challenges of utilizing telemedicine.

Weaver, C. Publications: Efficacy of implementing intermittent STOP THE BLEED® reviews on long term retention of hemorrhage control skills of first year medical students, *Journal of Osteopathic Medicine.* Presentations/abstracts: Residency round-up: takin' the show on the road.

Weemer, M. Publications: Environmental constructs associated with school readiness to implement wellness, *Health Behavior and Policy Review.* Presentations/abstracts: Assessing COVID-19 impacts on school health using the WSCC. Collective action for school-wellness: an ecological example.

Welch Bacon, CE. Publications: A qualitative analysis of concussion-reporting behavior in collegiate student-athletes with a history of sport-related concussion, *Journal of Athletic Training.* Academic employers' impressions regarding the qualifications of athletic trainers with the doctor of athletic training degree, *Athletic Training Education Journal.* Addressing the habitual practice issue: the role of unlearning in promoting evidence-based practice and lifelong learning, *Athletic Training Education Journal.* Adolescent athletes' perspectives on the social implications of sport-related concussion, *Internet Journal of Allied Health Sciences and Practice.* Athletic trainers' perceptions and frequency of use of health care core competencies, *Internet Journal of Allied Health Sciences and Practice.* Athletic training preceptors' perceptions of the characteristics for contemporary expertise, *Athletic Training Education Journal.* Athletic training residency program development and assessment of advanced clinical reasoning,

Athletic Training Education Journal. Barriers to scholarship integration in professional athletic training programs and resources needed to overcome barriers: a report from the Association for Athletic Training Education Research Network, *Athletic Training Education Journal.* Celebrating women scholars in athletic training, *Journal of Athletic Training.* Characteristics of athletic training students' patient encounters during immersive and nonimmersive clinical experiences: a report from the Association for Athletic Training Education Research Network, *Athletic Training Education Journal.* Characteristics of patient encounters for athletic training students during clinical education: a report from the Association for Athletic Training Education Research Network, *Journal of Athletic Training.* Core competency-related professional behaviors during patient encounters: a report from the Association for Athletic Training Education Research Network, *Journal of Athletic Training.* Documentation practices of athletic trainers employed in the clinic, physician practice, and emerging clinical settings, *Journal of Athletic Training.* Educational technique: incorporating social determinants of health into athletic training education, *Athletic Training Education Journal.* Educators' perceptions of characteristics that define athletic training student competence: a report from the Association for Athletic Training Education Research Network, *Athletic Training Education Journal.* Employability in academe for athletic trainers with the doctor of athletic training degree, *Journal of Athletic Training.* Factors influencing athletic trainers pursuing residency training, *Athletic Training Education Journal.* Faculty and preceptor perceptions of their respective roles in athletic training student development, *Athletic Training Education Journal.* Going beyond the state law: investigating high school sport-related concussion protocols., *Journal of Athletic Training.* Knowledge translation in athletic training: considerations for bridging the knowledge-to-practice gap, *Journal of Athletic Training.* Pain education with therapeutic exercise in chronic nonspecific low back pain rehabilitation: a critically appraised topic, *Journal of Sport Rehabilitation.* Patient care documentation in the secondary school setting: unique challenges and needs, *Journal of Athletic Training.* Personalized learning pathways: using technology to promote learning beyond the classroom, *New Directions for Teaching and Learning.* Program administrators' perceived challenges associated with developing preceptors, *Athletic Training Education Journal.* Social determinants of health: considerations for athletic health care, *Journal of Athletic Training.* Supporting students after a concussion: school administrators' perspectives, *Perspectives in Learning.* Teachers' perceived knowledge and confidence regarding adolescent concussion management, *Journal of Education and Learning.* The ability of baseline and normative neurocognitive testing to identify cognitive impairments following concussion: a critically appraised topic, *International Journal of Athletic Therapy and Training.* The critical need for advanced training in electronic records use: implications for clinical practice, education, and the advancement of athletic training, *Journal of Athletic Training.* Using the health belief model to predict concussion-reporting intentions and behaviour, *Brain Injury.* Presentations/abstracts: Academic electronic medical records: an education tool to enhance patient documentation and health information

technology in clinical practice. Academic electronic medical records: an educational tool to enhance patient documentation and health information technology in clinical practice. Athletic trainers' familiarity with and perceptions of athletic training scope of practice. Athletic trainers' observations of social determinants of health in the secondary school setting. Athletic trainers' perceived barriers towards developing and maintaining an area of contemporary expertise. Athletic trainers' perceptions and frequency of use of health care core competencies. Athletic trainers' perceptions of and experience with social determinants of health in the collegiate and university setting. Athletic trainers' perceptions of and experiences with social determinants of health in the secondary school setting. Athletic trainers' perceptions of and experiences with unlearning in clinical practice. Athletic trainers' perceptions of social determinants of health. Athletic training student application of health information technology based on their role during patient encounters: a report from the AATE Research Network. Athletic training student core competency professional behavior implementation between immersive and non-immersive experiences: a report from the AATE Research Network. Athletic training students' knowledge of social determinants of health. Athletic training students' perceptions of translating knowledge from classroom to clinical practice. Developing and assessing clinical reasoning in athletic training residency education. Development and validation of a novel concussion documentation audit tool. Documentation behaviors of athletic trainers employed in college/university clinical settings. Educational research: building my research plan part 1. Educational research: building my research plan part 2. Factors influencing athletic trainers to pursue residency training. Graduate students' use and perceptions of learning resources provided in a human anatomy course. Influence of preceptor/student gender bias on the implementation of core competency professional behaviors during clinical experience: a report from the AATE Research Network. Observation of social determinants of health in athletic health care. Outcomes assessed by athletic trainers to determine return-to-activity following an ankle sprain. Practice-based research experiences of Doctor of Athletic Training degree graduates. Reliability of a novel concussion documentation audit tool. Social determinants of health in athletic training education. The meaning and importance of contemporary expertise in athletic training.

Whisenant, E. Presentations/abstracts: Assessing the impact of team-based care on blood pressure control in patients with hypertension. Developing the primary care transformation executive (PCTE) fellowship curriculum. Exploring clinician and staff knowledge, attitudes and practices related to childhood immunizations. Exploring provider stress and the relationship to recruitment and retention in a community health center system. Exploring the impact of EHR optimization on clinician well-being. Factors influencing retention of primary care providers in rural Northern Arizona. Implementing a blood pressure measurement protocol to improve the diagnosis and treatment of hypertension. Leading and teaching in the nation's health centers to address health disparities: the PCTE fellowship. Prioritizing preventative health in older adults residing in long term care facilities through vaccination.

Refining the blood pressure measurement protocol to improve the diagnosis and treatment of hypertension. Supporting student learning and transformational change in health care. The H&P 360: developing an integrated learning innovation to expand the role of social determinants of health in equitable chronic disease prevention and management. The Primary Care Transformation Executive (PCTE) fellowship: fostering interprofessional education, practice, and research for primary care clinicians.

White, E.J. Publications: The triple helix of clinical, research, and education missions in academic health centers: a qualitative study of diverse stakeholder perspectives, *Learning Health Systems.* Presentations/abstracts: Preparing incoming medical students for success using online prematriculation coursework.

Wilkinson, TC. Presentations/abstracts: Evolution in clinical education: from the summit to current practices. Investigating assessment of clinical performance: feasibility of adopting a new tool. Stakeholder perspectives on payment for clinical experience: NCCE Taskforce summary findings and final recommendations.

Williams, B. Publications: A mixed-methods study of the effectiveness and perceptions of a course design institute for health and science educators, *BMC Medical Education.* Presentations/abstracts: Reading fatigue: the cost of varying page lengths in e-textbooks on student self-regulation skills. Scenario-based training research project: a self-paced approach to offer professional development to clinical educators. Teaching essential course design skills: investigation of a professional development opportunity for health science educators.

Wilson, M. Publications: Transitioning medical education and healthcare delivery, *Missouri Medicine.*

Woldt, J.L. Publications: Reflective writing in dental education to improve critical thinking and learning: a systematic review, *Journal of Dental Education.* Presentations/abstracts: The accreditation self-study: consider it handled!

Wolf, RL. Publications: Unemployed individuals reporting hindrance work stress at previous job have increased likelihood of insomnia disorder, *International Journal of Behavioral Medicine.* Presentations/abstracts: Experimental education in advocacy for occupational therapy practitioners and students. Parent education and creative art interventions for foster families.

Yesudas, R. Presentations/abstracts: Downregulation of angiotensin type 1 receptor by ferulic acid in rat liver epithelial cells. Ferulic acid specific inhibition of angiotensin type 1 receptor expression. Worms with armor: tegumental adaptations of stomach fluke, *Dinurus* sp. (Trematoda: Hemiuridae)—ultrastructural characteristics.

Young, BA. Publications: Morphometrics of the spinal cord and surrounding structures in *Alligator mississippiensis*, *Biology.* Slithering CSF: cerebrospinal fluid dynamics in the stationary and moving viper boa, *Candoia aspera*, *Biology.* The acoustical effect of the neck frill of the frill-necked lizard (*Chlamydosaurus kingii*), *Journal*

Please note: Peer-reviewed journal publications, presentations, and abstracts are included as reported in the Fall 2020 through Supplement 2022 *ATSU Research* newsletters, prepared by Research Support. Individuals listed were full-time and part-time ATSU faculty and staff members at the time publications, presentations, or abstracts were self-reported to Research Support.

Please note: Peer-reviewed journal publications, presentations, and abstracts are included as reported in the Fall 2020 through Supplement 2022 *ATSU Research* newsletters, prepared by Research Support. Individuals listed were full-time and part-time ATSU faculty and staff members at the time publications, presentations, or abstracts were self-reported to Research Support.

of the Acoustical Society of America. The functional morphology of the postpulmonary septum of the American alligator (*Alligator mississippiensis*), *The Anatomical Record*. The morphology of the suboccipital region in snakes, and the anatomical and functional diversity of the myodural bridge, *Journal of Morphology*. The myodural bridge of the American alligator (*Alligator mississippiensis*) alters CSF flow, *Journal of Experimental Biology*. The orbitalauricular chord of Alligator: the unusual functional linkage between the earflap and eyelid of Crocodylians, *Journal of Anatomy*. Treadmill locomotion in the American alligator (*Alligator mississippiensis*) produces dynamic changes in intracranial cerebrospinal fluid pressure, *Scientific Reports*. Variations in the cerebrospinal fluid dynamics of the American alligator (*Alligator mississippiensis*), *Fluids and Barriers of the CNS*. Presentations/abstracts: Cerebrospinal fluid pressure is significantly influenced by movement. Pedal anchoring in the American alligator (*Alligator mississippiensis*). The biomechanics of pedal anchoring in *Alligator mississippiensis*. The influence of venous blood on lumbar cerebrospinal fluid pressure.

Young, J.L. Publications: Patient expectations for synchronous telerehabilitation visits: a survey study of telerehabilitation-naïve patients, *Telemedicine and e-Health*. Presentations/abstracts: Utilization of knee radiographs and the influence on rehabilitation for patellofemoral pain.

Zetterlund, E. Presentations/abstracts: AHEC Scholars: addressing health workforce shortages.

Please note: Peer-reviewed journal publications, presentations, and abstracts are included as reported in the Fall 2020 through Supplement 2022 *ATSU Research* newsletters, prepared by Research Support. Individuals listed were full-time and part-time ATSU faculty and staff members at the time publications, presentations, or abstracts were self-reported to Research Support.

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STUDENT SCHOLARLY ACTIVITY

September 2020-December 2022

Abbott, R. Presentations/abstracts: Near North Health quality improvement program: intimate partner violence education, awareness, and resources.

Abeydeera, D. Presentations/abstracts: Use of the Nutrition and Health Awareness (NHA) program in improving health knowledge and attitudes among New York City children.

Abiezzi, C. Presentations/abstracts: Mindfulness-based interventions in addressing negative health outcomes related to adverse childhood experiences.

Abrams, A. Presentations/abstracts: Correlation of surface topography volume and spirometry tidal volume. Improvements in volume measurements with the DIERS formetric 4D.

Abrams, J. Presentations/abstracts: Effect of apical patency on hypochlorite extrusion in a negative pressure system. Relationship between apical patency and irrigant fluid extrusion.

Abugattas, A. Presentations/abstracts: Prioritizing preventative health in older adults residing in long term care facilities through vaccination.

Adam, J. Presentations/abstracts: Twists, turns, and blockages to colorectal screening follow-up.

Adams, T. Publications: C-reactive protein levels associated with COVID-19 outcomes in the United States, *Journal of Osteopathic Medicine*.

Addison, J. Presentations/abstracts: Are advanced practice providers able to educate patients and effectively manage potential rabies exposures?

Agena, K. Presentations/abstracts: Correlations between FMS scores, breathing mechanics, and core stability endurance tests.

Agonoy, J. Presentations/abstracts: Interventions for work-related carpal tunnel syndrome.

Ahmad, H. Presentations/abstracts: Effect of shikonin treatment on B16 melanoma cells.

Ahmad, MS. Presentations/abstracts: Evaluation of intimate partner violence screening for pregnant women at Near North Health Services Corporation (NNHSC).

Ahmad, S. Presentations/abstracts: The compensatory effects of α Val-345 in the catalytic sites of ATP synthase.

Ahmann, A. Publications: Dermatologic and ophthalmologic treatment of erythema multiforme major: a case report, *Cureus*. Inferior vena cava filter use in the setting of gastrointestinal blood loss, malignancy, and multiple thromboembolisms: a case report, *Cureus*.

Akhavan, S. Presentations/abstracts: Virtual health and wellness program for elementary students.

Akhavan Tabib, N. Presentations/abstracts: Examining patient and provider perspectives of telemedicine in a community health clinic setting.

Akhtar, MM. Presentations/abstracts: Approaches to nutritional health awareness and first aid in students with special needs.

Akiha Hassan, T. Presentations/abstracts: Examining patient and provider perspectives of telemedicine in a community health clinic setting.

Akins, M. Presentations/abstracts: PT student supervision: overview of supervision definitions and ratios by state and territories.

Akintorin, Y. Presentations/abstracts: High-resolution ultrasound imaging for temporomandibular joint disorder assessment.

Al Samawi, YS. Publications: Preliminary study: evaluating the reliability of CBCT images for tongue space measurements in the field of orthodontics, *Oral Radiology*.

Please note: Peer-reviewed journal publications, presentations, and abstracts are included as reported in the Fall 2020 through Supplement 2022 *ATSU Research* newsletters, prepared by Research Support. Individuals listed were ATSU students, fellows, and residents at the time publications, presentations, or abstracts were self-reported to Research Support.

Al Shami, S. Publications: Implementation of teledentistry for orthodontic practices, *Journal of the World Federation of Orthodontists*. Teledentistry platforms for orthodontics, *Journal of Clinical Pediatric Dentistry*.

Aladroos, H. Presentations/abstracts: Effectiveness of educational events on osteopathic medicine awareness amongst healthcare workers at Family HealthCare Network.

Alakan, C. Presentations/abstracts: Pour some sugar on me: an analysis of diabetes telehealth follow-ups.

Alfaro, S. Publications: Nationwide analysis of proximity of American College of Surgeons verified and state-designated trauma centers to the nearest highway exit and associated prehospital motor vehicle collision fatalities, *Surgery*. Obesity implications on SARS-CoV-2 infections' prevalence, hospitalizations, critical care needs, fatalities and vaccination rates: a public health crisis, *Annals of Medicine and Surgery*. Presentations/abstracts: Determining average height and weight for the Mixteco-speaking pediatric population at the Community Healthcare Centers of the Central Coast.

Alfarra, M. Presentations/abstracts: Large scale dynamical model of macrophage/HIV interaction.

Algarra, A. Presentations/abstracts: Difficult conversations in various physical therapy settings: pilot study.

Alhuwalia, H. Presentations/abstracts: Community centered approach to educating mothers on health-related topics.

Allen, L. Presentations/abstracts: Hepatitis C treatment and management efficacy in a primary care setting.

Alvarez-Corona, A. Presentations/abstracts: Exploring provider stress and the relationship to recruitment and retention in a community health center system.

Ambrose, B. Presentations/abstracts: Provider preferences regarding the benefits and challenges of utilizing telemedicine.

Anderson, DL. Publications: Why hybrid programs are the future of physician assistant education, *The Journal of Physician Assistant Education*.

Anderson, L. Publications: SARS-CoV-2 testing and clinical outcomes in a Texas tertiary care center labor and delivery unit, *Baylor University Medical Center Proceedings*.

Andonian, A. Presentations/abstracts: Blood pressure screening of underserved individuals in southern Illinois.

Andrade, R. Publications: National analysis of whole blood and component versus component transfusions in civilian trauma patients who underwent a thoracotomy or laparotomy: toward improving patient outcomes and quality of care, *Surgery*. Nationwide analysis of proximity of American College of Surgeons verified and state-designated trauma centers to the nearest highway exit and associated prehospital motor vehicle collision fatalities, *Surgery*. Presentations/abstracts: Examining patient and provider perspectives of telemedicine in a community health clinic setting.

Arcib, LM. Presentations/abstracts: Retrospective analysis of NRM SARS-COV2 inpatient hospitalizations.

Arcibal, L. Presentations/abstracts: FDM and OMT as an adjunct for acute sports-related ankle sprain. Risk stratifying COVID-19 patients before and after creating a lab order set.

Arcipowski, J. Presentations/abstracts: Oral care for older adults: pre- and post-treatment assessment.

Arcus, K. Presentations/abstracts: Perceived experience of participating in a virtual whole body drumming class for adults with PD.

Arpin, T. Presentations/abstracts: The effect of cannabis use on local anesthesia and parenteral sedation.

Ashraf, H. Presentations/abstracts: Evaluating health knowledge, literacy, and activity levels of elementary students through the Nutrition and Health Awareness program.

Ashraf, S. Presentations/abstracts: Comparison of two submaximal aerobic exercise tests in the estimation of aerobic capacity: methodology.

Atia, M. Presentations/abstracts: The effect of cannabis use on local anesthesia and parenteral sedation.

Avina, J. Presentations/abstracts: Inulin protects intestinal epithelial cells from LPS-induced inflammation. Vitamin D3 prevents LPS-induced apoptosis and proliferation in IECs.

Ayers, J. Presentations/abstracts: Lack of MsrA activity reduced *S. aureus* pathogenesis in murine abscess model.

Ayub, I. Presentations/abstracts: COVID-19 vaccine hesitancy amongst adult patients at Adelante Healthcare in Maricopa County, AZ.

Azam, F. Presentations/abstracts: Hygiene and sanitation needs of people experiencing homelessness in Portland, OR.

Azim, S. Presentations/abstracts: Expression of ATP synthase encoding genes. Lack of DnaK and MsrA1 proteins and reduced stress tolerance in the bacterium.

Azorr, S. Presentations/abstracts: Physical therapy pro-bono clinic and its impact on clinical experience readiness.

Bakken, S. Presentations/abstracts: Self-reported driving habits and their relationship to measures of dual task mobility, attention, and cognition in PD.

Balajadia, M. Presentations/abstracts: Mini docs: a novel online course delivery to empower student advocates for SARS-CoV-2 safety on Oahu.

Balderas, ET. Presentations/abstracts: Perinatal health considerations in athletic health care.

Ball, B. Presentations/abstracts: Our experience with action research: managing patient with low back pain.

Balli, N. Publications: Trends in neurosurgical practice size: increased consolidation 2014-2019, *World Neurosurgery*. Presentations/abstracts: Misinformation nation: examining COVID-19 vaccine hesitancy and misinformation among parents of pediatric patients.

Banks, B. Presentations/abstracts: Professional development program focused on cultural competence in secondary school athletic training.

Banschbach, Z. Presentations/abstracts: The use of text messages to increase patient adherence to a physical therapy home exercise program.

Barboza, S. Presentations/abstracts: Fostering health therapeutic relationships: foster parent education program.

Barimani, MJ. Publications: Legionella: an uncommon cause of community-acquired pneumonia, *Journal of the American Academy of Physician Assistants*.

Barner, M. Presentations/abstracts: Immunohistochemical analysis of MTHFR in rat and human eyes.

Barnes, N. Publications: The role of process-directing agents on enamel lesion remineralization: fluoride boosters, *Biomimetics*. Presentations/abstracts: Customized 3D printed mask fitter improves the fit of KN95 respirators.

Barnhart, M. Publications: The influence of timing of reporting and clinic presentation on concussion recovery outcomes: a systematic review and meta-analysis, *Sports Medicine*. Presentations/abstracts: The ability of vestibular and oculomotor screenings to predict recovery after concussion: a systematic review.

Barnwell, C. Presentations/abstracts: Practice makes improvement: training accurate force delivery to spine models.

Barra, K. Publications: Advancing liver cancer prevention for American Indian populations in Arizona: an integrative review, *International*

Journal of Environmental Research and Public Health. Presentations/abstracts: Misinformation nation: examining COVID-19 vaccine hesitancy and misinformation among parents of pediatric patients.

Barrantes, B. Presentations/abstracts: PT student supervision: overview of supervision definitions and ratios by state and territories.

Bartell, B. Presentations/abstracts: An evidence-based recommendation for developing an early phase hip rehabilitation research design.

Bartlett, K. Presentations/abstracts: Does caregiver training improve safety and functional outcomes for patients with dementia?

Barton, A. Presentations/abstracts: The use of dual inclinometry to measure cervical rotation: an assessment of validity and reliability.

Bashir, S. Presentations/abstracts: KFM continuity of care and patient retention QI project.

Baskerville, A. Publications: Audiology, an important contributor to interprofessional holistic care: an interprofessional collaborative case example, *American Journal of Audiology*.

Basta, A. Presentations/abstracts: Virtual health and wellness program for elementary students.

Batten, S. Publications: Interprofessional approach to learning vascular access with ultrasonography by medical students and nurses, *Missouri Medicine*.

Bauer, D. Presentations/abstracts: Evaluating antibiotic prophylaxis protocols for the prevention of dental implant failure.

Bauer, K. Presentations/abstracts: Building allies from the community.

Bauer, R. Publications: HMGA2 immunoexpression is frequent in salivary gland pleomorphic adenoma: immunohistochemical and molecular analyses of PLAG1 and HMGA2 in 25 cases, *International Journal of Clinical & Experimental Pathology*. Presentations/abstracts: COVID-19's effect on parent's perception of dental treatment. HMGA2 immunoexpression is frequent in salivary gland pleomorphic adenoma: immunohistochemical and molecular analyses of PLAG1 and HMGA2 in 25 cases.

Becerra, RG. Presentations/abstracts: Para athletes: spatial and temporal sprint performance measures in athletes with hypertonia, ataxia, and athetosis. Spatial and temporal parameters in para athletes with hypertonia, ataxia, and athetosis.

Beckett, M. Presentations/abstracts: Where's MB2?

Bellisario, J. Presentations/abstracts: Twists, turns, and blockages to colorectal screening follow-up.

Bengston, A. Presentations/abstracts: Self-reported driving habits and their relationship to measures of dual task mobility, attention, and cognition in PD.

Berberich, J. Presentations/abstracts: Approaches to nutritional health awareness and first aid in students with special needs.

Berg, V. Presentations/abstracts: Diagnostic palpatory force asymmetries persist throughout OMM training.

Berrios, M. Presentations/abstracts: Anti-biofilm efficacy of 4 agents: a comparative study between 2 approaches. Cloning and expression of PG_RS02100 protein in *Porphyromonas gingivalis*. P. gingivalis T9SS and DPPs are linked to dysregulation of VSMC plasticity.

Berry, A. Presentations/abstracts: Effects of whole-body drumming for people with Parkinson's disease: mobility and quality of life.

Bertolio, M. Presentations/abstracts: Inflammatory changes in healthy adults due to e-cig use: a scoping review.

Bertrand, K. Presentations/abstracts: Increasing heat safety awareness for Arizonians experiencing homelessness.

Bhagat, S. Publications: Central retinal artery occlusion with atrial fibrillation or atrial flutter, *Graefe's Archive for Clinical and Experimental Ophthalmology*.

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STUDENT SCHOLARLY ACTIVITY (September 2020-December 2022)

Bhattarai, T. Presentations/abstracts: Near North Health quality improvement program: intimate partner violence education, awareness, and resources.

Bigby, L. Presentations/abstracts: What is the effect of music on cognitive skills in patients with dementia?

Bingham, J. Publications: Impact of osteopathic manipulative techniques on the management of dizziness caused by neuro-otologic disorders: protocol for systematic review and meta-analysis, *International Journal of Osteopathic Medicine*. Presentations/abstracts: Impact of osteopathic manipulative techniques on the management of dizziness caused by neuro-otologic disorders: systematic review and meta-analysis.

Bird, H. Presentations/abstracts: Ketamine assisted OMT for the treatment of chronic low back pain.

Blair, B. Presentations/abstracts: Do different configurations of the 6MWT impact distance traveled in people with Parkinson's disease?

Bledsoe, N. Presentations/abstracts: Carbonic anhydrase inhibition does not affect fatigue or force generation.

Bloebaum, L. Presentations/abstracts: Is testosterone responsible for increased male mortality in melanoma?

Bloomfield, L. Presentations/abstracts: Blood pressure screening of underserved individuals in southern Illinois.

Bobier, BP. Presentations/abstracts: The use of region-specific patient-reported outcome measures in athletic training—lower extremity: when and how athletic trainers utilize PROMs.

Boburka, SM. Publications: Reducing the sting: diagnosis and management of Hymenoptera venom allergy, *Journal of the American Academy of Physician Assistants*.

Bonazelli, E. Presentations/abstracts: A systematic literature review: relationships between US hospitals' executive leadership competencies and organizational VBP performance.

Borden, S. Presentations/abstracts: Why patients do not follow through with behavioral health referrals: a quality improvement project on patient-perceived barriers in a community health care setting.

Borden Harris, EC. Presentations/abstracts: Evaluating clinical responsibilities of athletic trainers in the physician practice.

Boss, S. Presentations/abstracts: Inflammatory changes in healthy adults due to e-cig use: a scoping review.

Boules, F. Presentations/abstracts: Clinical assessment of OHI and disclosing solution: which order is best?

Bouton, M. Presentations/abstracts: A bibliometric analysis of scholarly activity of authors of JPAE 2011-2020. Professional support of experienced physician assistant researchers.

Bowen, L. Presentations/abstracts: Developing a movement screen protocol for assessing injury risk in tactical athletes.

Bradley, C. Presentations/abstracts: Emotional health of ATSU medical and dental students in the era of COVID-19. Experiencing academic dentistry and dental education.

Brazeal, C. Presentations/abstracts: Effectiveness of educational events on osteopathic medicine awareness amongst healthcare workers at Family HealthCare Network.

Brennan, K. Presentations/abstracts: Perceived experience of participating in a virtual whole body drumming class for adults with PD.

Brian, C. Presentations/abstracts: How can occupational therapists intervene with women of child bearing age with vaginismus to improve participation in sexual activities?

Briones, N. Presentations/abstracts: Development and implementation of a movement screening assessment and corrective exercises for women's soccer.

Brionez-Wooster, M. Presentations/abstracts: Non-pharmacological sleep interventions and its effects on sleep quality.

Brow, G. Presentations/abstracts: Effectiveness of educational events on osteopathic medicine awareness amongst healthcare workers at Family HealthCare Network.

Brown, J. Presentations/abstracts: Addressing food insecurity by increasing awareness of local resources in Centreville, Illinois.

Brown, M. Presentations/abstracts: Association between cognitive test anxiety scale and poor COMSAE Phase 1 scores.

Brugo, A. Presentations/abstracts: Accuracy, reliability, and clinical feasibility of AI-assisted remote orthodontic tooth monitoring technology.

Bruno, M. Presentations/abstracts: Mini docs: empowering Waianae coast adolescents to be advocates for their health and their community.

Bryan, JP. Publications: Preoperative use of cryoanalgesia in total knee arthroplasty, *Journal of Orthopaedics for Physician Assistants*.

Buckshaw, RS. Presentations/abstracts: Implementing the CRAFFT at family health centers (FHCs) at NYU Langone.

Bush, DA. Presentations/abstracts: Provider preferences regarding the benefits and challenges of utilizing telemedicine.

Butt, D. Presentations/abstracts: Use of the Nutrition and Health Awareness (NHA) program in improving health knowledge and attitudes among New York City children.

Buyer, E. Presentations/abstracts: Healthcare experiences of persons with chronic pelvic pain described on Reddit: a qualitative study.

Buzzell, LS. Presentations/abstracts: Clinical variability of six-minute walk test protocols by licensed physical therapists: a survey.

Bybee, R. Presentations/abstracts: Hepatitis C treatment and management efficacy in a primary care setting.

Calandra, MJ. Publications: Clinical predictors of poor 30-day headache outcomes after an emergency department visit for acute post-traumatic headache, *American Journal of Emergency Medicine*. Presentations/abstracts: Examining patient and provider perspectives of telemedicine in a community health clinic setting.

Canaan, R. Publications: Development of competency in needle-guided procedures through the use of soft-embalmed cadavers, *Missouri Medicine*. Effect of occipitoatlantal decompression on cerebral blood flow dynamics as evaluated by Doppler ultrasonography, *Journal of the American Osteopathic Association*.

Cantoral, V. Presentations/abstracts: Investigating ketamine as a rapid-acting antidepressant in juvenile rats. Ketamine induces anxiety-like effects in juvenile rats.

Canuteson, N. Publications: Regulation of bFGF-induced effects on rat aortic smooth muscle cells by β 3-adrenergic receptors, *Current Research in Pharmacology and Drug Discovery*. Presentations/abstracts: Interactions between β 3-adrenergic receptors and bFGF-induced effects in rat aortic smooth muscle cells. Regulation of bFGF-induced effects on rat aortic smooth muscle cells by β 3-ARs.

Carey, L. Presentations/abstracts: The relationship between sensory impairment and gait performance in adults: a review.

Carlisle, T. Presentations/abstracts: Epidemiology of football-related injuries presenting to emergency departments in the US. Epidemiology of patients presenting to emergency departments in the United States with football-related injuries, 2006-2019.

Carson, A. Presentations/abstracts: Mindfulness-based interventions in addressing negative health outcomes related to adverse childhood experiences.

Carter, L. Publications: The role of process-directing agents on enamel lesion remineralization: fluoride boosters, *Biomimetics*. Presentations/

abstracts: Customized 3D printed mask fitter improves the fit of KN95 respirators.

Casey, A. Presentations/abstracts: Use of the Nutrition and Health Awareness (NHA) program in improving health knowledge and attitudes among New York City children.

Castaneda, A. Presentations/abstracts: Addressing barriers to osteopathic medical students obtaining research. Community centered approach to educating mothers on health-related topics.

Chadha, H. Presentations/abstracts: Prioritizing preventative health in older adults residing in long term care facilities through vaccination.

Chance, N. Presentations/abstracts: Hemarthrosis caused by infrapatellar plica injury. Obstetrics and gynecology resident confidence performing urinary incontinence slings prior to graduation.

Chandok, N. Presentations/abstracts: CBCT imaging to locate MB2 in maxillary first molars.

Chang, J. Presentations/abstracts: Association between cognitive test anxiety scale and poor COMSAE Phase 1 scores.

Chang, L. Presentations/abstracts: Reviewing the medical utility of incorporating racial identifiers in common diagnostic tools.

Chang, M. Presentations/abstracts: Twists, turns, and blockages to colorectal screening follow-up.

Chang, N. Presentations/abstracts: Medicaid coverage of pregnant women and youth: return to complete care following endodontic treatment.

Chastain, N. Presentations/abstracts: Analysis of experience vs no experience in osteopathic medical training.

Chaudhury, T. Presentations/abstracts: Twists, turns, and blockages to colorectal screening follow-up.

Chavez, M. Presentations/abstracts: Increasing heat safety awareness for Arizonians experiencing homelessness.

Chen, G. Presentations/abstracts: Near North Health quality improvement program: intimate partner violence education, awareness, and resources.

Chen, J. Presentations/abstracts: Mini docs: empowering Waianae coast adolescents to be advocates for their health and their community.

Chen, K. Presentations/abstracts: Addressing food insecurity by increasing awareness of local resources in Centreville, Illinois.

Cherry, M. Presentations/abstracts: The relationship between head and neck lymphedema and dysphagia for individuals with oropharyngeal cancer: a retrospective study.

Chhaniara, E. Presentations/abstracts: Provider preferences regarding the benefits and challenges of utilizing telemedicine.

Chiang, K. Presentations/abstracts: Colorectal cancer screening compliance in Community Health Centers of the Central Coast (CHCCC).

Chiappe, T. Presentations/abstracts: Provider preferences regarding the benefits and challenges of utilizing telemedicine.

Chitneni, A. Publications: A systematic review of patient-reported outcome measures used to assess postpartum pain using Consensus Based Standards for the Selection of Health Measurement Instruments (COSMIN) guidelines, *British Journal of Anaesthesia*. Peripheral stimulation of the saphenous and superior lateral genicular nerves for chronic knee pain, *Cureus*. Synergistic effects of dexamethasone and dexmedetomidine in extending the effects of pectoral I and pectoral II blocks for postoperative analgesia following total mastectomy with lymph node dissection, *Clinics and Practice*.

Chiu, A. Presentations/abstracts: Effects of combo treatments of curcumin, vitamins and steroids.

Cho, EA. Presentations/abstracts: Mini docs: a novel online course delivery to empower student advocates for SARS-CoV-2 safety on Oahu.

Choi, C. Presentations/abstracts: Near North Health quality improvement program: intimate partner violence education, awareness, and resources.

Choi, H. Publications: NFI-C is required for epiphyseal chondrocyte proliferation during postnatal cartilage development, *Molecules and Cells*.

Choudry, S. Presentations/abstracts: Preparing for pandemics: lesson plan design for elementary-aged children.

Christie, B. Presentations/abstracts: Reliability and validity of measuring cervical range of motion with dual inclinometry.

Cieremans, D. Presentations/abstracts: Use of the Nutrition and Health Awareness (NHA) program in improving health knowledge and attitudes among New York City children.

Cimino, G. Presentations/abstracts: Epidemiology of wrestling-related injuries treated in US emergency departments, 2007-2020.

Cisney, N. Presentations/abstracts: The use of dual inclinometry to measure cervical rotation: an assessment of validity and reliability.

Clauser, T. Presentations/abstracts: Effects of whole-body drumming for people with Parkinson's disease: mobility and quality of life.

Clem, M. Presentations/abstracts: How can occupational therapists intervene with women of child bearing age with vaginismus to improve participation in sexual activities?

Cofell, B. Publications: Amentoflavone promotes cellular uptake and degradation of amyloid-beta in neuronal cells, *International Journal of Morphology*. Presentations/abstracts: The role of amentoflavone on extracellular A β clearance in N2A cells.

Coleman, G. Presentations/abstracts: Impact of removable partial dentures on periodontal health of patients. The impact of confounding factors on periodontal health of patients with removable partial dentures.

Collier, A. Presentations/abstracts: COVID-19's effect on parent's perception of dental treatment.

Comstock, N. Presentations/abstracts: Improving the quality of diabetes management in a resident clinic setting. Optimizing diabetes management in an outpatient setting. Improving the quality of diabetes management in a resident clinic setting.

Concepcion, J. Publications: National analysis of whole blood and component versus component transfusions in civilian trauma patients who underwent a thoracotomy or laparotomy: toward improving patient outcomes and quality of care, *Surgery*. Nationwide analysis of proximity of American College of Surgeons verified and state-designated trauma centers to the nearest highway exit and associated prehospital motor vehicle collision fatalities, *Surgery*. Presentations/abstracts: Pour some sugar on me: an analysis of diabetes telehealth follow-ups.

Conti, K. Presentations/abstracts: The relationship between physical activity and health-related quality of life in patients with Crohn's disease: a systematic review.

Coolman, TD. Publications: Dermatologist burnout: contribution of gender and impact of children, *Journal of the American Academy of Dermatology*.

Cooper, A. Presentations/abstracts: Comparison of two submaximal aerobic exercise tests in the estimation of aerobic capacity: methodology.

Cooper, T. Publications: Unexpected populations for deep vein thrombosis: presentation in an endurance athlete, *Cureus*.

Coronel, I. Presentations/abstracts: The effects of cannabis use on oral health.

Cortes, G. Publications: An atypical case of Chilaiditi syndrome, *Cureus*.

Cortes, G. Publications: A case report on managing hemolysis, elevated liver enzymes, and low platelets (HELLP syndrome) during a rapid response code, *Cureus*. Salpingovesical fistula mimicking an enterovaginal fistula, *Radiology Case Reports*.

Please note: Peer-reviewed journal publications, presentations, and abstracts are included as reported in the Fall 2020 through Supplement 2022 *ATSU Research* newsletters, prepared by Research Support. Individuals listed were ATSU students, fellows, and residents at the time publications, presentations, or abstracts were self-reported to Research Support.

Please note: Peer-reviewed journal publications, presentations, and abstracts are included as reported in the Fall 2020 through Supplement 2022 *ATSU Research* newsletters, prepared by Research Support. Individuals listed were ATSU students, fellows, and residents at the time publications, presentations, or abstracts were self-reported to Research Support.

STUDENT SCHOLARLY ACTIVITY (September 2020-December 2022)

Covillo, A. Presentations/abstracts: Colorectal cancer screening compliance in Community Health Centers of the Central Coast (CHCCC).

Cox, J. Publications: Characteristics and treatment of geriatric patients in an osteopathic neuromusculoskeletal medicine (ONMM) clinic, *Journal of Osteopathic Medicine*. Presentations/abstracts: Interrelatedness of forearm and neck somatic dysfunction: an osteopathic manipulative treatment case report.

Cravens, E. Presentations/abstracts: Curricular changes to increase quality of healthcare for individuals with intellectual and developmental disabilities: combating health disparities by increasing inclusion in medical education. Downregulation of angiotension type 1 receptor by ferulic acid in rat liver epithelial cells. Ferulic acid specific inhibition of angiotensin type 1 receptor expression.

Credle, M. Presentations/abstracts: Defining adaptive sports experiences: a national survey of physical therapy and physical therapy assistant programs.

Cregar, K. Presentations/abstracts: Sensory programming with Piller Child Development. The Fostering Healthy Parents Program: a specialized program developed for the foster care community.

Cring, K. Presentations/abstracts: Perceived experience of participating in a virtual whole body drumming class for adults with PD.

Crish, A. Presentations/abstracts: Approaches to nutritional health awareness and first aid in students with special needs.

Croswell, J. Presentations/abstracts: Reliability and validity of a new floor transfer test for people with Parkinson's disease.

Crotts, MS. Presentations/abstracts: Doramectin induces apoptosis in B16 melanoma cells. Doramectin induces apoptosis in murine melanoma B16F10 cells. Early identification and diagnosis of sepsis in the hospital population. Silibinin protects melanoma cells from staurosporine-induced cell death.

Cubillo, C. Presentations/abstracts: COVID-19 vaccine hesitancy amongst adult patients at Adelante Healthcare in Maricopa County, AZ.

Cummins, T. Presentations/abstracts: Patient database and applications with 3-D printing.

Cunningham, JW. Publications: Prompt evaluation and treatment of third-trimester bleeding, *Journal of the American Academy of Physician Assistants*.

Cunningham, S. Presentations/abstracts: How maternal employment affects duration of breastfeeding: a systematic review. "Playing together": outcomes of an online telehealth sensory-motor development program for parents with children between the ages of 1.0-6.11 years.

Cupp, J. Presentations/abstracts: Dietary supplement use, knowledge, and perceptions among students enrolled in coordinated programs in diatetics.

Cutler, BJ. Presentations/abstracts: Evaluation of intimate partner violence screening for pregnant women at Near North Health Services Corporation (NNHSC).

D'Angelo, E. Presentations/abstracts: Participation in adaptive sports programs: perceptions of the parent and child.

Dadbin, T. Presentations/abstracts: Use of the Nutrition and Health Awareness (NHA) program in improving health knowledge and attitudes among New York City children.

Dagat, LA. Publications: Regulation of bFGF-induced effects on rat aortic smooth muscle cells by β 3-adrenergic receptors, *Current Research in Pharmacology and Drug Discovery*.

Dagstanyan, V. Presentations/abstracts: Mindfulness-based interventions in addressing negative health outcomes related to adverse childhood experiences.

Daher, Y. Publications: The history of medical education: a commentary on race, *Journal of the American Osteopathic Association*.

Daniel, J. Presentations/abstracts: Effectiveness of educational events on osteopathic medicine awareness amongst healthcare workers at Family HealthCare Network.

Danylyk, S. Presentations/abstracts: Development of a chairside multilingual oral health literacy assessment tool.

Dao, K. Presentations/abstracts: A protocol for dynamic body-weight support gait training to improve walking parameters after chronic stroke.

Darnall, C. Publications: Pelvic inflammatory disease: diagnosis, education, and treatment options, *Practical Pain Management*.

Datario, AV. Presentations/abstracts: Cytokine analysis of mice vaccinated with *S. aureus* autolysin protein ATL. Objective force palpation feedback using force pad technology. Potential of the autolysin protein ATL as a vaccine candidate in protection.

Davis, B. Presentations/abstracts: Exploring the effects of a syringe services program (SSP) in a Native American community.

Davis, T. Presentations/abstracts: Locomotor and cognitive effects of high intensity gait training in early post-stroke rehabilitation.

Dawley, A. Presentations/abstracts: Occupational health and safety for commercial pilots during the coronavirus pandemic.

De La Torre, C. Presentations/abstracts: Evaluation of intimate partner violence screening for pregnant women at Near North Health Services Corporation (NNHSC).

De Venecia, M. Presentations/abstracts: Blood pressure screening of underserved individuals in southern Illinois.

Deckert, CF. Presentations/abstracts: Para athletes: spatial and temporal sprint performance measures in athletes with hypertonia, ataxia, and athetosis. Spatial and temporal parameters in para athletes with hypertonia, ataxia, and athetosis.

Dedmari, S. Presentations/abstracts: Combating racism in future medical practice: integration of inclusive dermatology toolkit into undergraduate medical education.

Dekrell, A. Presentations/abstracts: Oral care for older adults: pre- and post-treatment assessment.

Delzell, M. Presentations/abstracts: Is testosterone responsible for increased male mortality in melanoma?

Deninger, K. Presentations/abstracts: Twists, turns, and blockages to colorectal screening follow-up.

DePalma, S. Publications: Understanding resistant hypertension, *Journal of the American Academy of Physician Assistants*.

Desai, R. Presentations/abstracts: Approaches to nutritional health awareness and first aid in students with special needs.

Detwiler, K. Presentations/abstracts: Negotiating salary among athletic trainers: experiences of negotiators and non-negotiators.

DeVore, K. Presentations/abstracts: Piecing together the subtle clues of common variable immunodeficiency.

Diemer, C. Presentations/abstracts: Analysis of variation in the obturator artery in Midwestern donor bodies.

Dinh, D. Presentations/abstracts: Health education video development: improving health literacy in Afghan refugees to better navigate the US pharmacy system.

Dinh, M. Presentations/abstracts: Near North Health quality improvement program: intimate partner violence education, awareness, and resources.

DiNicola, C. Presentations/abstracts: Near North Health quality improvement program: intimate partner violence education, awareness, and resources.

Dinosa, TN. Presentations/abstracts: Mini docs: a novel online course delivery to empower student advocates for SARS-CoV-2 safety on Oahu.

DiSanti, JS. Publications: Exploring parent-athlete dyads' perceptions of sports specialization and sport experiences in an early youth community-based sport program, *Orthopaedic Journal of Sports Medicine*.

Do, J. Presentations/abstracts: Community centered approach to educating mothers on health-related topics.

Do, W. Presentations/abstracts: Clinical assessment of OHI and disclosing solution: which order is best?

Doan Van, EE. Presentations/abstracts: Examining patient and provider perspectives of telemedicine in a community health clinic setting.

Donahue, B. Presentations/abstracts: Athletic training students' perceptions of and experiences with knowledge translation.

Donato, MV. Presentations/abstracts: Fracture resistance of CAD/CAM crowns fabricated with novel lithium disilicate combinations. Fracture resistance of chair-side CAD/CAM lithium disilicate molar crowns.

Dowding, DD. Publications: High grade uterine adenocarcinoma with sarcomatous overgrowth in a young woman amenable to primary surgical reduction: a case study and literature review, *Gynecologic Oncology Reports*.

Doyel, N. Presentations/abstracts: Improving the quality of diabetes management in a resident clinic setting.

Doyle, D. Presentations/abstracts: Is testosterone responsible for increased male mortality?

Dransfield, J. Presentations/abstracts: The incidence of jaw pain referrals to OMS due to impacted asymptomatic third molars.

Dubina, N. Presentations/abstracts: Implant angulation differences in the 1st and 2nd mandibular molar region.

Duecker, M. Presentations/abstracts: Healthcare experiences of persons with chronic pelvic pain described on Reddit: a qualitative study.

Dugal, J. Presentations/abstracts: Hepatitis C treatment and management efficacy in a primary care setting.

Dugum, A. Presentations/abstracts: Hygiene and sanitation needs of people experiencing homelessness in Portland, OR.

Duncan, CJ. Presentations/abstracts: The use of text messages to increase patient adherence to a physical therapy home exercise program.

Duncan, CT. Presentations/abstracts: Ensuring the use of best practices for hand hygiene in an athletic training healthcare system.

Durnil, L. Presentations/abstracts: A qualitative pilot study to investigate the attitudes and beliefs of clinical instructors about low back pain classification systems.

Durr, T. Presentations/abstracts: Evaluating health knowledge, literacy, and activity levels of elementary students through the Nutrition and Health Awareness program.

Durrani, O. Presentations/abstracts: Reliability and validity of a new floor transfer test for people with Parkinson's disease.

Edwards, S. Presentations/abstracts: Mindfulness-based interventions in addressing negative health outcomes related to adverse childhood experiences.

Eklund, K. Presentations/abstracts: Implementation of a protocol for conservative treatment of thumb carpometacarpal osteoarthritis.

Elja, S. Presentations/abstracts: Hepatitis C treatment and management efficacy in a primary care setting.

Elomina, M. Presentations/abstracts: Which occupation-based interventions improve postpartum mental health in mothers with infants in the neonatal intensive care unit?

Englestead, B. Presentations/abstracts: Reference values in individuals without disabilities for activity limitation tests used in para-athletics classification.

English, C. Presentations/abstracts: Cerebrospinal fluid pressure is significantly influenced by movement. The influence of venous blood on lumbar cerebrospinal fluid pressure.

Erickson, J. Presentations/abstracts: Vitamin D3 prevents LPS-induced apoptosis and proliferation in IECs.

Ernest, TL. Publications: Use of the contralateral knee as a control in the destabilization of medial meniscus osteoarthritis rat model, *Missouri Medicine*.

Eschbach, C. Presentations/abstracts: ATSU-MOSDOH Smiles for Veterans program. Oral care for older adults: pre- and post-treatment assessment.

Esrail, R. Presentations/abstracts: Improving knowledge of services provided at the Family Support Center (FSC) of NYU-LH to increase ability to address social determinants of health.

Evans, C. Presentations/abstracts: The relationships between early sports specialization, overuse injuries, and health-related quality of life in throwing athletes. Upper extremity injury history impacts current health related quality of life in collegiate baseball and softball athletes.

Evans, D. Presentations/abstracts: Why patients do not follow through with behavioral health referrals: a quality improvement project on patient-perceived barriers in a community health care setting.

Evans Windsor, C. Presentations/abstracts: Athletic trainers' observations of social determinants of health in the collegiate setting.

Everhart, E. Publications: Amentoflavone promotes cellular uptake and degradation of amyloid-beta in neuronal cells, *International Journal of Morphology*. Presentations/abstracts: The effects of amentoflavone on A β 40-induced cerebrovascular dysfunction.

Fader, T. Presentations/abstracts: What is the effect of music on cognitive skills in patients with dementia?

Faisal, F. Presentations/abstracts: Implementing the CRAFT at family health centers (FHCs) at NYU Langone.

Farnham, M. Presentations/abstracts: Healthcare experiences of persons with chronic pelvic pain described on Reddit: a qualitative study.

Farrell, J. Presentations/abstracts: Fetal bovine serum induces chemotaxis and chemokinesis by *Trichomonas tenax*.

Fehervari, A. Presentations/abstracts: Evaluating health knowledge, literacy, and activity levels of elementary students through the Nutrition and Health Awareness program.

Felfeli, M. Presentations/abstracts: Cultural competency education of dental students and its impact on patient care: a qualitative study.

Ferguson, MJ. Presentations/abstracts: Use of the Nutrition and Health Awareness (NHA) program in improving health knowledge and attitudes among New York City children.

Ferian, K. Presentations/abstracts: Best practices for managing mental health conditions in the collegiate setting.

Fermo, C. Presentations/abstracts: Reviewing the medical utility of incorporating racial identifiers in common diagnostic tools.

Ferrer, K. Presentations/abstracts: Occupational therapy in an outpatient multidisciplinary intensive feeding therapy program: food protein induced enterocolitis. Parental stress related to autism spectrum disorder feeding difficulties.

Ferrin, Z. Presentations/abstracts: Gender differences in screening colonoscopies: ADR, WT, and adenomas.

Filion, T. Presentations/abstracts: Ability360 Center for Independent Living program evaluation and modification.

Finch, B. Presentations/abstracts: Preparing for pandemics: lesson plan design for elementary-aged children.

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STUDENT SCHOLARLY ACTIVITY (September 2020-December 2022)

Frank, LD. Publications: Characteristics and management of pregnant patients from a neuromusculoskeletal medicine/osteopathic manipulative medicine clinic, *Journal of the American Osteopathic Association*.

Franklin, T. Presentations/abstracts: Approaches to nutritional health awareness and first aid in students with special needs.

Frasier, KM. Presentations/abstracts: Why patients do not follow through with behavioral health referrals: a quality improvement project on patient-perceived barriers in a community health care setting.

Frenette, RS. Publications: Lack of enteral feeding associated with mortality in prematurity and necrotizing enterocolitis, *Journal of Surgical Research*. Liposomal bupivacaine injection in Nuss procedure allows narcotic avoidance and improved outcomes, *Journal of Laparoendoscopic & Advanced Surgical Techniques*. Size matters: early gastrostomy tube dislodgment in children, *Journal of Laparoendoscopic & Advanced Surgical Techniques*.

Fromhoff, B. Presentations/abstracts: Foundations of emotional intelligence in communication: building empathy and personal resiliency.

Frommer, B. Presentations/abstracts: Retrospective analysis of NRM SARS-COV2 inpatient hospitalizations. Role of MTA3 on growth, migration, and invasion in B16 melanoma cells.

Fu, A. Presentations/abstracts: Use of the Nutrition and Health Awareness (NHA) program in improving health knowledge and attitudes among New York City children.

Fuentebella, FT. Presentations/abstracts: Outcome measures: knowledge translation of APTA clinical practice guidelines to practicing physical therapists.

Fulk, C. Presentations/abstracts: Parent perceptions on minimally invasive dentistry during the Covid-19 pandemic.

Fulmer, W. Presentations/abstracts: Reasons for definitive restoration completion outcomes following endodontic treatment: a qualitative assessment.

Gaddy, H. Presentations/abstracts: Assessment of cannabis use among dental urgent care patients.

Gadiok, G. Publications: Spontaneous intraperitoneal urinary bladder rupture due to alcohol-intoxication, *Urology*.

Gallagher Poehls, C. Presentations/abstracts: Virtual health and wellness program for elementary students.

Ganjeh, Y. Publications: Evaluation of pain management in patients undergoing septoplasty, *Journal of Community Medicine and Public Health Reports*.

Garcia, RM. Presentations/abstracts: Mini docs: empowering Waianae coast adolescents to be advocates for their health and their community.

Garcia Escalante, R. Presentations/abstracts: Defining adaptive sports experiences: a national survey of physical therapy and physical therapy assistant programs.

Garrison, D. Presentations/abstracts: Standardizing methodology for headache research in manipulative therapy.

Gascon, G. Presentations/abstracts: Blood pressure screening of underserved individuals in southern Illinois.

Gassman, M. Presentations/abstracts: Malignant anomalous coronary artery with bicuspid aortic valve: case report.

Genzer, O. Presentations/abstracts: Implementing a blood pressure measurement protocol to improve the diagnosis and treatment of hypertension. Refining the blood pressure measurement protocol to improve the diagnosis and treatment of hypertension.

Ghuman, K. Presentations/abstracts: Mental health workshops with high school students.

Giessinger, J. Publications: Histiocytic and dendritic cell sarcomas of hematopoietic origin share targetable genomic alterations distinct from follicular dendritic cell sarcoma, *The Oncologist*. Pautrier microabscess: a topic of great controversy, *The American Journal of Dermatopathology*.

Gleason, K. Presentations/abstracts: Prevalence of physical therapy screening for urinary incontinence in Arizona.

Goff, A. Presentations/abstracts: Protection against amyloid- β -induced cerebrovascular dysfunction.

Gokhale, A. Presentations/abstracts: Reviewing the medical utility of incorporating racial identifiers in common diagnostic tools.

Goldenstein, A. Presentations/abstracts: Sweet syndrome secondary to azathioprine use for myasthenia gravis.

Gomez, O. Presentations/abstracts: Difficult conversations in various physical therapy settings: pilot study.

Gonda, B. Presentations/abstracts: Hemarthrosis caused by infrapatellar plica injury. Reducing the time to find medical supplies among medical students.

Gonzales, D. Presentations/abstracts: The relationship between sensory impairment and gait performance in adults: a review.

Gonzales, J. Publications: Fibrocartilaginous metaplasia and neovascularization of the anterior cruciate ligament in patients with osteoarthritis, *Clinical Anatomy*.

Gonzalez Medina, K. Presentations/abstracts: The modified Thomas test: a narrative review.

Gooding, SJ. Presentations/abstracts: Dentures for Veterans program assessment: database creation.

Gore, K. Presentations/abstracts: Establishing test-retest reliability and internal consistency of the occupational resilience measure.

Gourishetty, N. Presentations/abstracts: Why patients do not follow through with behavioral health referrals: a quality improvement project on patient-perceived barriers in a community health care setting.

Gousman, J. Publications: A retrospective CBCT study of the relationship between mandibular symphysis bone density and mandibular growth direction, *Journal of Clinical Pediatric Dentistry*.

Grant, S. Presentations/abstracts: Evaluating health knowledge, literacy, and activity levels of elementary students through the Nutrition and Health Awareness program.

Gray, R. Publications: Congenital appendiceal diverticulum: an incidental finding during an appendectomy, *Cureus*. Presentations/abstracts: Improving the quality of diabetes management in a resident clinic setting. Optimizing diabetes management in an outpatient setting.

Greer, A. Presentations/abstracts: Emotional health of ATSU medical and dental students in the era of COVID-19.

Greer, S. Publications: Morphometrics of the spinal cord and surrounding structures in *Alligator mississippiensis*, *Biology*. Slithering CSF: cerebrospinal fluid dynamics in the stationary and moving viper boa, *Candoia aspera*, *Biology*. The functional morphology of the postpulmonary septum of the American alligator (*Alligator mississippiensis*), *The Anatomical Record*. The morphology of the suboccipital region in snakes, and the anatomical and functional diversity of the myodural bridge, *Journal of Morphology*.

Gregory, C. Presentations/abstracts: Pour some sugar on me: an analysis of diabetes telehealth follow-ups.

Gries, F. Presentations/abstracts: Approaches to nutritional health awareness and first aid in students with special needs.

Grindstaff, A. Presentations/abstracts: Measurement of intravascular PO₂ in the rat kidney: proof of concept.

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A.T. STILL MEMORIAL LIBRARY

A.T. Still Memorial Library supports the University's mission of education, community health, diversity, and scholarship by providing user-focused spaces, learner-centered instruction, targeted information resources, responsive services, and expert staff, all of which are informed by evidence-based practice (EBP) and osteopathic principles. In support of this mission, the library offers a wide range of research support services to faculty, students, and staff, as well as instruction on EBP and research topics to further the instructional goals of ATSU.

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STUDENT SCHOLARLY ACTIVITY (September 2020-December 2022)

Grinshpun, L. Presentations/abstracts: Mindfulness-based interventions in addressing negative health outcomes related to adverse childhood experiences.

Gronde, B. Publications: The morphology of the suboccipital region in snakes, and the anatomical and functional diversity of the myodural bridge, *Journal of Morphology*. The orbitaauricular chord of Alligator: the unusual functional linkage between the earflap and eyelid of Crocodylians, *Journal of Anatomy*. Presentations/abstracts: Gender differences in screening colonoscopies: ADR, WT, and adenomas. Hyperparathyroidism in the setting of multiglandular hyperplasia.

Gronde, P. Presentations/abstracts: Effects of parturition and life stage on obstetric pelvic dimensions. Female pelvic dimensions at different ages in parous and nulliparous individuals.

Grover, J. Presentations/abstracts: An evidence-based recommendation for developing an early phase hip rehabilitation research design.

Grover, S. Presentations/abstracts: Improving knowledge of services provided at the Family Support Center (FSC) of NYU-LH to increase ability to address social determinants of health.

Grutz, C. Presentations/abstracts: The effects of cannabis use on oral health.

Guan, M. Presentations/abstracts: How to better manage special needs patients in a dental setting.

Guarneri, B. Publications: The e-sports athlete ergonomics: carpal tunnel and common injuries related to prolonged gaming, *Journal of Community Medicine and Public Health Reports*.

Gujral, I. Publications: The e-sports athlete ergonomics: carpal tunnel and common injuries related to prolonged gaming, *Journal of Community Medicine and Public Health Reports*.

Gunn, B. Publications: Development of competency in needle-guided procedures through the use of soft-embalmed cadavers, *Missouri Medicine*. Use of a novel bicarbonate-based Impella 5.5 purge solution in a coagulopathic patient, *Journal of Cardiac Surgery*.

Gutovitz, J. Presentations/abstracts: Cannabis use and oral health study.

Guzman Elias, R. Presentations/abstracts: Medicaid coverage of pregnant women and youth: return to complete care following endodontic treatment.

Hackl, L. Presentations/abstracts: Impact of the level of parental involvement in occupational therapy services on patient outcomes for children ages 0-3 in the outpatient setting.

Haddad, S. Publications: Subungual calcification and nail dystrophy: a case of a man with subungual calcinosis cutis and an associated split nail plate, *Cureus*. Presentations/abstracts: Effectiveness of educational events on osteopathic medicine awareness amongst healthcare workers at Family HealthCare Network.

Hajicek, J. Presentations/abstracts: Effect of objective training on asymmetry assessments of the pelvis.

Halila, K. Publications: Regulation of bFGF-induced effects on rat aortic smooth muscle cells by β 3-adrenergic receptors, *Current Research in Pharmacology and Drug Discovery*. Presentations/abstracts: Interactions between β 3-adrenergic receptors and bFGF-induced effects in rat aortic smooth muscle cells.

Halim, IA. Publications: The use of a modified miniscrew-assisted rapid palatal expander to correct bilateral posterior crossbite and unilateral Class II malocclusion, *American Journal of Orthodontics & Dentofacial Orthopedics*.

Hamme, J. Presentations/abstracts: Clinical evaluation findings in patients diagnosed with deltoid ligament ankle sprains: a report from the Athletic Training Practice-Based Research Network.

Hammer, M. Presentations/abstracts: Improving the quality of diabetes management in a resident clinic setting. Optimizing diabetes management in an outpatient setting.

Handlin, L. Presentations/abstracts: Effects of mitragynine on the mu-opioid receptor in *Xenopus oocytes*.

Hang, J. Presentations/abstracts: Reporting quality of randomized controlled trials.

Hanna, M. Presentations/abstracts: Examining patient and provider perspectives of telemedicine in a community health clinic setting.

Hansen, B. Presentations/abstracts: Home health occupational therapy program through the Arizona Division of Developmental Disabilities.

Hardack, M. Presentations/abstracts: MOSDOH nutritional influence assessment.

Harness, L. Presentations/abstracts: Does caregiver training improve safety and functional outcomes for patients with dementia?

Harrelson, K. Presentations/abstracts: Mindfulness-based interventions in addressing negative health outcomes related to adverse childhood experiences.

Harris-Kinnick, C. Presentations/abstracts: Reliability of scoring student performance of thrust joint manipulation using the MPRT.

Harrison, E. Presentations/abstracts: Perceptions of athletic training in the US Virgin Islands.

Harrison, M. Presentations/abstracts: The use of virtual reality in pain management for pediatric patients in the acute hospital setting.

Hart, O. Presentations/abstracts: Prevalence of carotid artery calcifications on military veterans' panoramic radiographs.

Hasan, N. Publications: A case report on managing hemolysis, elevated liver enzymes, and low platelets (HELLP syndrome) during a rapid response code, *Cureus*. An atypical case of Chilaiiditi syndrome, *Cureus*.

Haselsteiner, A. Presentations/abstracts: A parental dyad experience of having a child diagnosed with autism. Parent education and creative art interventions for foster families.

Hasson, C. Publications: Traumatic humeral diaphysis extrusion and replantation with periosteal involvement, *Journal of Medical Cases*.

Hauge, K. Presentations/abstracts: AHEC Scholars: addressing health workforce shortages.

Havard, M. Presentations/abstracts: COVID-19 vaccine hesitancy amongst adult patients at Adelante Healthcare in Maricopa County, AZ.

Hawkes, A. Presentations/abstracts: Implementing the collection of patient reported outcomes in an athletic training healthcare setting.

Hawley, D. Publications: Positive effect of home hemodialysis in a pregnant woman with chronic kidney failure during the COVID-19 pandemic: a case report, *Case Reports in Women's Health*.

Haynes, W. Publications: Advocacy for change: an osteopathic review of traumatic brain injury among combat veterans, *Cureus*. The impact of COVID-19 pandemic on dermatological conditions: a novel, comprehensive review, *Dermatopathology*.

Headlee, J. Presentations/abstracts: Carbonic anhydrase inhibition does not affect fatigue or force generation. Characterization of colorectal polyps in cadavers.

Heier, AK. Presentations/abstracts: Muscle metabolite receptors to NaV1.9 channels in muscle afferent neurons.

Heldt, E. Presentations/abstracts: The development of an exercise-based fall prevention program tailored to incorporate caregivers caring for older adults at risk for falls.

Helfer, A. Presentations/abstracts: Regional body composition differences among college football players.

Heller, E. Presentations/abstracts: Oxidative stress induced by oxysterols in the brain endothelial cells. Protection against amyloid- β -induced cerebrovascular dysfunction.

Hemsley, NA. Presentations/abstracts: Evaluation of intimate partner violence screening for pregnant women at Near North Health Services Corporation (NNHSC).

Hemwazi, S. Presentations/abstracts: Misinformation nation: examining COVID-19 vaccine hesitancy and misinformation among parents of pediatric patients.

Henderson, N. Presentations/abstracts: Reference values in individuals without disabilities for activity limitation tests used in para-athletics classification.

Henry, C. Presentations/abstracts: Assessment of cannabis use among dental urgent care patients.

Henry, D. Presentations/abstracts: Early identification and diagnosis of sepsis in the hospital population.

Hensel, J. Presentations/abstracts: Assessing the impact of team-based care on blood pressure control in patients with hypertension.

Herbert, E. Presentations/abstracts: Preparing for pandemics: lesson plan design for elementary-aged children.

Herbst, A. Presentations/abstracts: Use of upper extremity region-specific patient-reported outcome measures by athletic trainers.

Hernandez, D. Presentations/abstracts: Participation in adaptive sports programs: perceptions of the parent and child.

Hernandez, N. Presentations/abstracts: The use of virtual reality in pain management for pediatric patients in the acute hospital setting.

Herron, C. Presentations/abstracts: Qualities of ATSU DPT graduates identified as contributing factors to leadership in the physical therapy profession.

Heyer, B. Presentations/abstracts: Effect of haptic feedback with single and dual tasks on gait in people with Parkinson's disease.

Hibbs, E. Presentations/abstracts: Misinformation nation: examining COVID-19 vaccine hesitancy and misinformation among parents of pediatric patients.

Hickman, KA. Publications: Flying too close to the sun: navigating changes to CMS' Open Payments program, *Journal of the American Academy of Physician Assistants*. Presentations/abstracts: Compliance and liability considerations for physicians and organizations employing physician assistants and nurse practitioners: a review of case law and complaints.

Hicks, SM. Presentations/abstracts: Defining adaptive sports experiences: a national survey of physical therapy and physical therapy assistant programs.

Hilfer, A. Presentations/abstracts: Accuracy of BIA devices to estimate body fat in college women athletes. Comparison of upper- and lower-body power tests in college female athletes. Work capacity and estimation of 1RM bench press in athletes.

Hill, A. Presentations/abstracts: Preparing for pandemics: lesson plan design for elementary-aged children.

Hintz, M. Publications: Use of the contralateral knee as a control in the destabilization of medial meniscus osteoarthritis rat model, *Missouri Medicine*.

Hlavaty, R. Presentations/abstracts: Agreement between concussion policy and clinical practice on aspects of concussion management.

Ho, A. Presentations/abstracts: Mindfulness-based interventions in addressing negative health outcomes related to adverse childhood experiences.

Ho, T. Presentations/abstracts: Blood pressure screening of underserved individuals in southern Illinois.

Ho, V. Presentations/abstracts: The effects of cannabis use on oral health.

Hobbs, SL. Presentations/abstracts: Enhancing clinical employers' understanding of athletic trainers with a doctor of athletic training degree.

Hodges, B. Presentations/abstracts: Reviewing the medical utility of incorporating racial identifiers in common diagnostic tools.

Hoerr, C. Presentations/abstracts: Effect of diode laser therapy on periodontal parameters in maintenance patients.

Hoffman, J. Presentations/abstracts: Outcome measures: knowledge translation of APTA clinical practice guidelines to practicing physical therapists.

Holbrook, K. Presentations/abstracts: KFM continuity of care and patient retention QI project.

Holcom, M. Presentations/abstracts: The effectiveness of sensory interventions on social participation.

Hollebeck, SJ. Presentations/abstracts: Association between cognitive test anxiety scale and poor COMSAE Phase 1 scores. Preparing for pandemics: lesson plan design for elementary-aged children.

Hollister, L. Presentations/abstracts: The use of virtual reality in pain management for pediatric patients in the acute hospital setting.

Hollywood, E. Publications: Risk factors for hepatitis C virus infection at a large urban emergency department, *Journal of Viral Hepatitis*.

Holt, C. Presentations/abstracts: G protein-coupled receptors potentially mediate the exercise pressor reflex. Muscle metabolite receptors to NaV1.9 channels in muscle afferent neurons.

Holt, NR. Publications: Efficacy of implementing intermittent STOP THE BLEED® reviews on long term retention of hemorrhage control skills of first year medical students, *Journal of Osteopathic Medicine*.

Holt, VN. Presentations/abstracts: Implementing the CRAFT at family health centers (FHCs) at NYU Langone.

Holte, K. Presentations/abstracts: Oral manifestations of patients self-disclosing cannabis use at the St. Louis Dental Center.

Hook, T. Presentations/abstracts: MOSDOH nutritional influence assessment.

Hossain, A. Presentations/abstracts: Virtual health and wellness program for elementary students.

Huerta, V. Presentations/abstracts: Addressing food insecurity by increasing awareness of local resources in Centreville, Illinois.

Hughes, G. Presentations/abstracts: COVID-19 vaccine hesitancy amongst adult patients at Adelante Healthcare in Maricopa County, AZ.

Hughes, T. Publications: Inhibition of Escherichia coli ATP synthase by dietary ginger phenolics, *International Journal of Biological Macromolecules*.

Huh, Y. Presentations/abstracts: Accuracy of AI-assisted growth prediction model using diverse malocclusion cases with longitudinal follow-up.

Humpal, C. Publications: Amentoflavone promotes cellular uptake and degradation of amyloid-beta in neuronal cells, *International Journal of Morphology*.

Humphrey, C. Presentations/abstracts: Glutamatergic signaling in a rat model of Alzheimer's disease (AD).

Huson, C. Presentations/abstracts: Relationship of self-reported driving habits with attention and cognition in people with Parkinson's disease.

Hutchins, J. Presentations/abstracts: Clinically significant morphology of the internal thoracic artery branches.

Hutzley, S. Presentations/abstracts: Morphometric analysis of pyramidalis muscle in Midwestern Americans.

Please note: Peer-reviewed journal publications, presentations, and abstracts are included as reported in the Fall 2020 through Supplement 2022 *ATSU Research* newsletters, prepared by Research Support. Individuals listed were ATSU students, fellows, and residents at the time publications, presentations, or abstracts were self-reported to Research Support.

Please note: Peer-reviewed journal publications, presentations, and abstracts are included as reported in the Fall 2020 through Supplement 2022 *ATSU Research* newsletters, prepared by Research Support. Individuals listed were ATSU students, fellows, and residents at the time publications, presentations, or abstracts were self-reported to Research Support.

STUDENT SCHOLARLY ACTIVITY (September 2020-December 2022)

Huy, H. Presentations/abstracts: Evaluation of intimate partner violence screening for pregnant women at Near North Health Services Corporation (NNHSC).

Huynh, N. Publications: Deconstructing ableism in health care settings through case-based learning, *MedEdPORTAL*.

Hwang, JY. Presentations/abstracts: Implementing the CRAFFT at family health centers (FHCs) at NYU Langone.

Hyer, J. Publications: Color stability of fully- and pre-crystallized chair-side CAD-CAM lithium disilicate restorations after required and additional sintering processes, *Journal of Advanced Prosthodontics*. Comparison of full and partial coverage crowns with CAD/CAM leucite reinforced ceramic blocks on fracture resistance and fractographic analysis, *Dental Materials Journal*. Presentations/abstracts: Color stability of conventional and novel chairside CAD/CAM lithium disilicate crowns after required and additional sintering processes. Color stability of novel lithium disilicate CAD/CAM ceramics after additional sintering processes. Comparison of full and partial coverage crowns with CAD/CAM leucite reinforced ceramic blocks on fracture resistance and fractographic analysis. Fracture strength of crownlay restorations fabricated out of two CAD/CAM leucite ceramics.

Imbrogno, K. Presentations/abstracts: Mini docs: empowering Waianae coast adolescents to be advocates for their health and their community.

Inkabi, S. Presentations/abstracts: Understanding the impact of *Cryptococcus neoformans*: microglia interactions.

Ishii-Chaves, H. Presentations/abstracts: Misinformation nation: examining COVID-19 vaccine hesitancy and misinformation among parents of pediatric patients.

Ismail, I. Presentations/abstracts: Preparing for pandemics: lesson plan design for elementary-aged children.

Isono, M. Presentations/abstracts: Evaluation of intimate partner violence screening for pregnant women at Near North Health Services Corporation (NNHSC).

Ivie, E. Presentations/abstracts: Reasons for definitive restoration completion outcomes following endodontic treatment: a qualitative assessment.

Jackson, C. Presentations/abstracts: COVID-19 vaccine hesitancy amongst adult patients at Adelante Healthcare in Maricopa County, AZ.

Jacobs, J. Presentations/abstracts: Doramectin induces apoptosis in murine melanoma B16F10 cells. Silibinin protects melanoma cells from staurosporine-induced cell death.

Jacobs, L. Presentations/abstracts: Clinically significant morphology of the internal thoracic artery branches.

Jacobson, A. Publications: Efficacy of implementing intermittent STOP THE BLEED® reviews on long term retention of hemorrhage control skills of first year medical students, *Journal of Osteopathic Medicine*. Presentations/abstracts: Reviewing the medical utility of incorporating racial identifiers in common diagnostic tools.

Jalil, S. Presentations/abstracts: Misinformation nation: examining COVID-19 vaccine hesitancy and misinformation among parents of pediatric patients.

Jammu, A. Presentations/abstracts: Curricular changes to increase quality of healthcare for individuals with intellectual and developmental disabilities: combating health disparities by increasing inclusion in medical education.

Jang, S. Presentations/abstracts: Hepatitis C treatment and management efficacy in a primary care setting.

Jarecki, M. Presentations/abstracts: Reference values in individuals without disabilities for activity limitation tests used in para-athletics classification.

Javaid, I. Presentations/abstracts: Community centered approach to educating mothers on health-related topics.

Jent, J. Presentations/abstracts: Medicaid coverage of pregnant women and youth: return to complete care following endodontic treatment.

Jepson, L. Presentations/abstracts: Development of hands-on skills in diagnostics of lung diseases using ultrasonography while reducing medical student contact with each other during the pandemic.

Jimenez, I. Presentations/abstracts: Physical therapy pro-bono clinic and its impact on clinical experience readiness.

Johnson, A. Presentations/abstracts: G protein-coupled receptors potentially mediate the exercise pressor reflex.

Johnson, A. Presentations/abstracts: Mental health workshops with high school students.

Johnson, B. Presentations/abstracts: Characterization of colorectal polyps in cadavers.

Johnson, C. Presentations/abstracts: Printing in curriculum and research: create, engage, and empower—seven years later!

Johnson, S. Presentations/abstracts: Hygiene and sanitation needs of people experiencing homelessness in Portland, OR.

Jones, BC. Presentations/abstracts: Athletic training students' knowledge of social determinants of health. Preceptors' perceptions of clinical reasoning in athletic training practice.

Jones, D. Presentations/abstracts: Association between cognitive test anxiety scale and poor COMSAE Phase 1 scores.

Jones, I. Presentations/abstracts: Our experience with action research: managing patient with low back pain.

Jones, J. Presentations/abstracts: Addressing food insecurity by increasing awareness of local resources in Centreville, Illinois.

Jones, J. Presentations/abstracts: Reducing the time to find medical supplies among medical students.

Jones, V. Presentations/abstracts: Cannabis use and oral health study.

Joseph, J. Presentations/abstracts: The modified Thomas test: a narrative review.

Joyce, J. Presentations/abstracts: Incarcerated adults and community reintegration.

Jrolf, CW. Publications: Managing obesity in adults as a chronic condition, *Journal of the American Academy of Physician Assistants*.

Jue, H. Presentations/abstracts: Focus group model for collaborative health education with refugees in King County, WA.

Kahlon, J. Presentations/abstracts: Mini docs: empowering Waianae coast adolescents to be advocates for their health and their community.

Kai, A. Publications: The effectiveness of virtual interviews for postgraduate orthodontic residencies in North America, *Journal of the World Federation of Orthodontists*. The use of a modified miniscrew-assisted rapid palatal expander to correct bilateral posterior crossbite and unilateral Class II malocclusion, *American Journal of Orthodontics & Dentofacial Orthopedics*.

Kajeh, P. Presentations/abstracts: Effect of d-PTFE membrane surface on soft and hard tissue healing in ridge preservation: a case report. Efficacy of ClōSYS® anticavity toothpaste and GentleMINT rinse regimen on plaque, gingival inflammation and bleeding upon probing.

Kamal, S. Presentations/abstracts: Focus group model for collaborative health education with refugees in King County, WA.

Kane, I. Publications: A novel, interactive game to improve understanding of respiratory control pathways in first-year medical students, *Advances in Physiology Education*. Can a digital ear otoscope improve anatomical recognition of the inner ear landmarks, comfort and confidence in first year medical students? *Journal of Osteopathic*

Medicine. Presentations/abstracts: Provider preferences regarding the benefits and challenges of utilizing telemedicine.

Karafa, E. Presentations/abstracts: Reasons for definitive restoration completion outcomes following endodontic treatment: a qualitative assessment.

Kashanirokh, B. Presentations/abstracts: Use of the Nutrition and Health Awareness (NHA) program in improving health knowledge and attitudes among New York City children.

Kasprzak, V. Presentations/abstracts: Health education video development: improving health literacy in Afghan refugees to better navigate the US pharmacy system.

Kato, A. Presentations/abstracts: Reviewing the medical utility of incorporating racial identifiers in common diagnostic tools.

Kaufmann, E. Publications: Can a digital ear otoscope improve anatomical recognition of the inner ear landmarks, comfort and confidence in first year medical students? *Journal of Osteopathic Medicine*. Presentations/abstracts: Pour some sugar on me: an analysis of diabetes telehealth follow-ups.

Kaur, H. Presentations/abstracts: High-resolution ultrasound imaging for temporomandibular joint disorder assessment.

Kaur, N. Presentations/abstracts: Approaches to nutritional health awareness and first aid in students with special needs.

Kaur, R. Presentations/abstracts: Health education video development: improving health literacy in Afghan refugees to better navigate the US pharmacy system.

Kayali, H. Presentations/abstracts: Assessing barriers: why tobacco dependence treatment does not occur in the dental clinic.

Keller-Chavez, M. Presentations/abstracts: Patient database and applications with 3-D printing.

Keltner, M. Presentations/abstracts: Spatial and temporal parameters in para athletes competing in classes T53 and T54.

Kendall, K. Presentations/abstracts: Quantitative median nerve assessment at carpal tunnel among repetitive wrist use dental practitioners.

Kennedy, C. Presentations/abstracts: Developing and implementing a balance training program for women's basketball.

Kennedy, K. Presentations/abstracts: Evaluating health knowledge, literacy, and activity levels of elementary students through the Nutrition and Health Awareness program.

Keswani, V. Presentations/abstracts: Virtual health and wellness program for elementary students.

Khan, A. Publications: Causes of medication error in nursing, *Journal of Medical Research and Health Sciences*.

Khinnarath, A. Presentations/abstracts: Interventions for work-related carpal tunnel syndrome.

Kim, G. Presentations/abstracts: Evaluation of intimate partner violence screening for pregnant women at Near North Health Services Corporation (NNHSC).

Kim, JH. Publications: Implementation of teledentistry for orthodontic practices, *Journal of the World Federation of Orthodontists*. Teledentistry platforms for orthodontics, *Journal of Clinical Pediatric Dentistry*. Trends in the choice of a clinician for orthodontic treatment in the United States, *American Journal of Orthodontics & Dentofacial Orthopedics*. Presentations/abstracts: Accuracy, reliability, and clinical feasibility of AI-assisted remote orthodontic tooth monitoring technology.

Kim, M. Presentations/abstracts: Risk factors for infectious flare-ups after endodontic treatment. The role of stromal derived hCG in erythropoiesis.

Kinney, K. Presentations/abstracts: Improving the quality of diabetes management in a resident clinic setting.

Kirkpatrick, S. Presentations/abstracts: Enhancing sustainability of global health initiatives through community engagement and public health education. Focus group model for collaborative health education with refugees in King County, WA.

Kirsch, G. Presentations/abstracts: Mental health emergency action plans.

Klaassen, K. Presentations/abstracts: Do different configurations of the 6MWT impact distance traveled in people with Parkinson's disease?

Klar, L. Presentations/abstracts: Development of a clinician education module on hippotherapy with Parkinson's disease.

Klatt, C. Presentations/abstracts: Comparison of two submaximal aerobic exercise tests in the estimation of aerobic capacity: methodology.

Kleinman, J. Presentations/abstracts: Hepatitis C treatment and management efficacy in a primary care setting.

Kleutsch, K. Presentations/abstracts: Assessing patient perceptions about dental experiences and teledentistry in the emergency department. Patient experiences and willingness to use teledentistry in emergency departments.

Klinner, A. Presentations/abstracts: Investigating ketamine as a rapid-acting antidepressant in juvenile rats. Ketamine induces anxiety-like effects in juvenile rats. Regulation of PDGF-induced effects on rat aortic smooth muscle cells by β3-ARs.

Klutcharch, K. Presentations/abstracts: Patient database and applications with 3-D printing.

Klynstra, J. Presentations/abstracts: Using horses in physical therapy for people with Parkinson's disease: effects on mobility and quality of life.

Knutson, V. Publications: C-reactive protein levels associated with COVID-19 outcomes in the United States, *Journal of Osteopathic Medicine*.

Koester, E. Presentations/abstracts: Oral manifestations of patients self-disclosing cannabis use at the St. Louis Dental Center.

Kogut, B. Presentations/abstracts: Interventions for work-related carpal tunnel syndrome.

Komro, J. Publications: Fibrocartilaginous metaplasia and neovascularization of the anterior cruciate ligament in patients with osteoarthritis, *Clinical Anatomy*.

Kondameedi, S. Presentations/abstracts: Why patients do not follow through with behavioral health referrals: a quality improvement project on patient-perceived barriers in a community health care setting.

Kono, K. Presentations/abstracts: Mini docs: empowering Waianae coast adolescents to be advocates for their health and their community.

Kosan, BC. Presentations/abstracts: Current clinical concepts: omega-3 supplementation for concussion management in adults.

Kothari, T. Presentations/abstracts: Focus group model for collaborative health education with refugees in King County, WA.

Kouts, T. Presentations/abstracts: Parental stress related to autism spectrum disorder feeding difficulties. The use of ManageMed Screening tool for directing occupational therapy intervention in the home health setting.

Krakora, M. Presentations/abstracts: Mini docs: empowering Waianae coast adolescents to be advocates for their health and their community.

Krouse, A. Presentations/abstracts: Evaluating health knowledge, literacy, and activity levels of elementary students through the Nutrition and Health Awareness program.

Krueger, K. Presentations/abstracts: Xenograft morphology impact on hard and soft tissue growth in site preservation: a case report.

Kuhns, C. Presentations/abstracts: MOSDOH nutritional influence assessment.

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STUDENT SCHOLARLY ACTIVITY (September 2020-December 2022)

Kuhns, J. Presentations/abstracts: How can occupational therapists intervene with women of child bearing age with vaginismus to improve participation in sexual activities?

Kulkarni, R. Publications: An atypical case of Chilaiditi syndrome, *Cureus*.

Kumar, P. Presentations/abstracts: Salivary pH and buffering change following use of pHighter Mint™.

Kun, B. Presentations/abstracts: Hygiene and sanitation needs of people experiencing homelessness in Portland, OR.

Kuntz, M. Presentations/abstracts: Health education video development: improving health literacy in Afghan refugees to better navigate the US pharmacy system.

Kurien, T. Presentations/abstracts: Implementing the CRAFFT at family health centers (FHCs) at NYU Langone.

La, R. Presentations/abstracts: Impact of removable partial dentures on periodontal health of patients. The impact of confounding factors on periodontal health of patients with removable partial dentures.

LaCorte, M. Presentations/abstracts: Pour some sugar on me: an analysis of diabetes telehealth follow-ups.

Laguerre, E. Publications: Association between nutrition behavior and colorectal cancer diet recommendation, *Journal of Cancer Prevention*.

Lai, A. Presentations/abstracts: Virtual health and wellness program for elementary students.

Laird, J. Publications: Magnetic sphincter augmentation device placement for treatment of gastroesophageal reflux, *Journal of the American Academy of Physician Assistants*.

Lakhani, M. Publications: Inhibition of Escherichia coli ATP synthase and cell growth by dietary pomegranate phenolics, *International Journal of Biological Macromolecules*. Presentations/abstracts: Inhibition of Escherichia coli ATP synthase by dietary pomegranate phenolics. Inhibition of Escherichia coli ATP synthase by shikonin and alkanin. Potent inhibition of Escherichia coli ATP synthase by pomegranate phenolics: E. coli ATP synthase, enzyme inhibition, punicalagin, and ellagic acid.

Lam, K. Presentations/abstracts: Mini docs: empowering Waianae coast adolescents to be advocates for their health and their community.

Land, M. Presentations/abstracts: Lack of DnaK and MsrA1 proteins and reduced stress tolerance in the bacterium.

Lang, T. Publications: A brief introduction to PAs in Germany, *Journal of the American Academy of Physician Assistants*. A comparison of German and United States physician assistant curricula, *The Journal of Physician Assistant Education Association*.

Lange, M. Presentations/abstracts: Potential SARS-CoV-2 sequelae: new onset atrial fibrillation.

Lange, R. Presentations/abstracts: M1Y substitution in mRNA and expression of CFTR in *Xenopus* oocytes.

Lao, A. Presentations/abstracts: Health education video development: improving health literacy in Afghan refugees to better navigate the US pharmacy system.

Largent, K. Presentations/abstracts: Relationship between sensory impairment and gait performance following stroke.

Larkin, A. Presentations/abstracts: Accuracy of AI-assisted growth prediction model using diverse malocclusion cases with longitudinal follow-up.

Lau, A. Presentations/abstracts: Combating racism in future medical practice: integration of inclusive dermatology toolkit into undergraduate medical education. Determining average height and weight for the Mixteco-speaking pediatric population at the Community Healthcare Centers of the Central Coast.

Lau, C. Presentations/abstracts: Prioritizing preventative health in older adults residing in long term care facilities through vaccination.

Lawrence, J. Presentations/abstracts: Non-pharmacological sleep interventions and its effects on sleep quality.

Layton, J. Presentations/abstracts: Relationship between sensory impairment and gait performance following stroke.

Le, AM. Presentations/abstracts: Oxidation to a respiratory brainstem area in an Alzheimer's rat model.

Le, C. Presentations/abstracts: Effect of novel over-the-counter LED whitening products on CAD/CAM lithium disilicate ceramics.

Le, D. Presentations/abstracts: Prioritizing preventative health in older adults residing in long term care facilities through vaccination.

Le, V. Presentations/abstracts: Presence of xerostomia/dry mouth and management protocols amongst ATSU-MOSDOH patients: a pilot study.

Leake, J. Presentations/abstracts: Self-reported driving habits and their relationship to measures of dual task mobility, attention, and cognition in PD.

Leavitt, BD. Presentations/abstracts: Evaluating the accuracy and precision of intraoral scanners.

Lebeck, B. Presentations/abstracts: Our experience with action research: managing patient with low back pain.

LeBlanc, M. Publications: Escalation of an otherwise curable cancer: retroperitoneal mass destruction associated with testicular seminoma in a psychiatric patient, *Cureus*. Unexpected populations for deep vein thrombosis: presentation in an endurance athlete, *Cureus*.

Lee, A. Presentations/abstracts: Focus group model for collaborative health education with refugees in King County, WA.

Lee, A. Presentations/abstracts: Mindfulness-based interventions in addressing negative health outcomes related to adverse childhood experiences.

Lee, C. Presentations/abstracts: Provider preferences regarding the benefits and challenges of utilizing telemedicine.

Lee, H. Presentations/abstracts: Oral health care and malocclusion in children with autism spectrum disorder.

Lee, J. Presentations/abstracts: Hygiene and sanitation needs of people experiencing homelessness in Portland, OR.

Lee, J. Presentations/abstracts: Implementing the CRAFFT at family health centers (FHCs) at NYU Langone.

Lee, S. Presentations/abstracts: Association between cognitive test anxiety scale and poor COMSAE Phase 1 scores.

Lee, SJ. Presentations/abstracts: Cultural competency education of dental students and its impact on patient care: a qualitative study.

Lehman, D. Presentations/abstracts: Twists, turns, and blockages to colorectal screening follow-up.

Lentner, J. Publications: C-reactive protein levels associated with COVID-19 outcomes in the United States, *Journal of Osteopathic Medicine*.

Lenz, S. Presentations/abstracts: Effects of whole-body drumming for people with Parkinson's disease: mobility and quality of life.

Leslie, L. Presentations/abstracts: Delivery of dental care and quality of life for older adults.

Lester, B. Presentations/abstracts: Reliability of scoring student performance of thrust joint manipulation using the MPRT.

Li, J. Presentations/abstracts: Use of the Nutrition and Health Awareness (NHA) program in improving health knowledge and attitudes among New York City children.

Liggett, T. Presentations/abstracts: Dentures for Veterans program assessment: database creation.

Ligocki, J. Presentations/abstracts: Oral manifestations of patients self-disclosing cannabis use at the St. Louis Dental Center.

Lim, K. Presentations/abstracts: Mini docs: a novel online course delivery to empower student advocates for SARS-CoV-2 safety on Oahu.

Lin, C. Presentations/abstracts: Twists, turns, and blockages to colorectal screening follow-up.

Lincicum, J. Presentations/abstracts: Clinical assessment of OHI and disclosing solution: which order is best?

Link, L. Presentations/abstracts: Prevalence of physical therapy screening for urinary incontinence in Arizona.

Litchfield, M. Presentations/abstracts: Emotional health of ATSU medical and dental students in the era of COVID-19.

Liu, A. Presentations/abstracts: Accuracy, reliability, and clinical feasibility of AI-assisted remote orthodontic tooth monitoring technology.

Liu, Y. Publications: Elabela may regulate SIRT3-mediated inhibition of oxidative stress through Foxo3a deacetylation preventing diabetic-induced myocardial injury, *Journal of Cellular and Molecular Medicine*. Presentations/abstracts: Evaluation of intimate partner violence screening for pregnant women at Near North Health Services Corporation (NNHSC).

Lochhead, A. Presentations/abstracts: A comprehensive manual of the shoulder exercise machine and an introduction to the potential benefits of the novel device.

Longman, L. Presentations/abstracts: Improving knowledge of services provided at the Family Support Center (FSC) of NYU-LH to increase ability to address social determinants of health.

Lucero, A. Presentations/abstracts: The relationship between sensory impairment and gait performance in adults: a review.

Lui, D. Presentations/abstracts: Non-pharmacological sleep interventions and its effects on sleep quality.

Lundeen, T. Presentations/abstracts: COVID-19 vaccine hesitancy amongst adult patients at Adelante Healthcare in Maricopa County, AZ.

Lundgren, A. Presentations/abstracts: Identification of an extracellular inhibitor of persistence in *S. aureus*.

Ly, M. Presentations/abstracts: Lesbian, gay, bisexual, transgender, queer, intersex, asexual, and other (LGBTQIA+) education in dental schools.

Lynch, E. Presentations/abstracts: What is the effect of music on cognitive skills in patients with dementia?

Mabitad, K. Presentations/abstracts: Addressing food insecurity by increasing awareness of local resources in Centreville, Illinois.

Macbeth, R. Presentations/abstracts: Hepatitis C treatment and management efficacy in a primary care setting.

MacDonald, J. Presentations/abstracts: Does caregiver training improve safety and functional outcomes for patients with dementia?

Mace, W. Presentations/abstracts: Role of β 3-adrenergic receptors (β 3-ARs) in vascular injury-induced neointima formation.

Maclaskey, D. Presentations/abstracts: Development of hands-on skills in diagnostics of lung diseases using ultrasonography while reducing medical student contact with each other during the pandemic.

MacSwords, J. Presentations/abstracts: KFM continuity of care and patient retention QI project.

Maddux, K. Publications: MAML2-Rearranged mucoepidermoid carcinoma of the parotid gland: a report in a 20-month-old toddler, *Case Reports in Dentistry*.

Madhava, S. Presentations/abstracts: Evaluating health knowledge, literacy, and activity levels of elementary students through the Nutrition and Health Awareness program.

Madich, HP. Presentations/abstracts: Para athletes: spatial and temporal sprint performance measures in athletes with hypertonia, ataxia, and athetosis. Spatial and temporal parameters in para athletes with hypertonia, ataxia, and athetosis.

Maharaj, DP. Presentations/abstracts: Implementing the CRAFFT at family health centers (FHCs) at NYU Langone.

Mahoney, N. Publications: A case of multifocal papillary carcinoma and thyrotoxicosis: hypokalemic periodic paralysis, *Journal of the American Academy of Physician Assistants*.

Majumdar, A. Presentations/abstracts: Prioritizing preventative health in older adults residing in long term care facilities through vaccination.

Makar, AE. Publications: Effect of occipitoatlantal decompression on cerebral blood flow dynamics as evaluated by Doppler ultrasonography, *Journal of the American Osteopathic Association*.

Malhi, A. Presentations/abstracts: Virtual health and wellness program for elementary students.

Malhi, J. Presentations/abstracts: Community centered approach to educating mothers on health-related topics.

Mallary, M. Presentations/abstracts: Hiking related fatalities Pinal County, AZ.

Manansala, J. Presentations/abstracts: Addressing barriers to osteopathic medical students obtaining research.

Manes, T. Publications: Fusobacterium necrophorum bacteremia with evidence of cavitory pulmonary lesion, *Cureus*.

Manes, TJ. Publications: Pulmonary embolism in transit across a patient foramen ovale, *Cureus*.

Maqsood, F. Publications: Prioritizing preventative health in older adults residing in long-term care facilities through vaccination, *Journal of Osteopathic Medicine*. Presentations/abstracts: Prioritizing preventative health in older adults residing in long term care facilities through vaccination.

Marguiles, K. Presentations/abstracts: The impact of methamphetamine abuse and mental health outreach in high school students of O'ahu, Hawai'i.

Marinovic, DA. Publications: Examining the interrelationships between mindfulness-based interventions, depression, inflammation, and cancer survival, *CA: A Cancer Journal for Clinicians*.

Marks, B. Presentations/abstracts: Focus group model for collaborative health education with refugees in King County, WA.

Marrakchi, D. Presentations/abstracts: Focus group model for collaborative health education with refugees in King County, WA.

Marsal, J. Publications: Early time-to-tocilizumab after B cell maturation antigen-directed chimeric antigen receptor T cell therapy in myeloma, *Transplantation and Cellular Therapy*.

Marshall, K. Presentations/abstracts: The influence of sport specialization on quality of life, physical literacy and injury history in adolescent hockey players.

Marske, E. Presentations/abstracts: Reliability and validity of measuring cervical range of motion with dual inclinometry.

Martinez, U. Presentations/abstracts: Community centered approach to educating mothers on health-related topics.

Please note: Peer-reviewed journal publications, presentations, and abstracts are included as reported in the Fall 2020 through Supplement 2022 *ATSU Research* newsletters, prepared by Research Support. Individuals listed were ATSU students, fellows, and residents at the time publications, presentations, or abstracts were self-reported to Research Support.

Please note: Peer-reviewed journal publications, presentations, and abstracts are included as reported in the Fall 2020 through Supplement 2022 *ATSU Research* newsletters, prepared by Research Support. Individuals listed were ATSU students, fellows, and residents at the time publications, presentations, or abstracts were self-reported to Research Support.

STUDENT SCHOLARLY ACTIVITY (September 2020-December 2022)

Martorana, A. Publications: Evaluation of pain management in patients undergoing septoplasty, *Journal of Community Medicine and Public Health Reports*. The e-sports athlete ergonomics: carpal tunnel and common injuries related to prolonged gaming, *Journal of Community Medicine and Public Health Reports*.

Marzvanyan, A. Publications: Photopolymerizable hydrogel-encapsulated fibromodulin-reprogrammed cells for muscle regeneration, *Tissue Eng Part A*.

Masters, H. Presentations/abstracts: Effects of whole-body drumming for people with Parkinson's disease: mobility and quality of life.

Materu, L. Presentations/abstracts: How simulated auditory hallucinations impact occupational performance and learning among OT students. Using sensory-based approaches to manage the effects of adverse childhood experiences among children in an acute behavioral health center.

Mathews, N. Presentations/abstracts: Reviewing the medical utility of incorporating racial identifiers in common diagnostic tools.

Matian, P. Presentations/abstracts: Effectiveness of educational events on osteopathic medicine awareness amongst healthcare workers at Family HealthCare Network.

Mazur, K. Presentations/abstracts: Reference values in individuals without disabilities for activity limitation tests used in para-athletics classification.

McDonald, L. Presentations/abstracts: Incarcerated adults and community reintegration.

McElroy, T. Publications: Inferior vena cava filter use in the setting of gastrointestinal blood loss, malignancy, and multiple thromboembolisms: a case report, *Cureus*.

McGilvery, W. Publications: Traumatic humeral diaphysis extrusion and replantation with periosteal involvement, *Journal of Medical Cases*.

McGinnis, M. Presentations/abstracts: Association between cognitive test anxiety scale and poor COMSAE Phase 1 scores. Supporting student learning and transformational change in health care. The impact of methamphetamine abuse and mental health outreach in high school students of O'ahu, Hawai'i.

McGrath, M. Publications: A case report on managing hemolysis, elevated liver enzymes, and low platelets (HELLP syndrome) during a rapid response code, *Cureus*. Prioritizing preventative health in older adults residing in long-term care facilities through vaccination, *Journal of Osteopathic Medicine*. Presentations/abstracts: Prioritizing preventative health in older adults residing in long term care facilities through vaccination.

Mckenzie, O. Presentations/abstracts: Reviewing the medical utility of incorporating racial identifiers in common diagnostic tools.

McKinney, G. Publications: Physical exercise versus intensive balance programs: a review of the effects exercise has on balance for patients with TBI and use of the BESS, *Journal of Exercise Physiology Online*.

McLaughlin, S. Presentations/abstracts: Dose-response to ketamine as an antidepressant in juvenile rats. Variability in researcher dependent data collection, rat behavioral testing.

McMillan, R. Publications: Neurodegenerative diseases and the auditory-vestibular system, *Hearing Journal*.

McNamara, A. Presentations/abstracts: Reasons for definitive restoration completion outcomes following endodontic treatment: a qualitative assessment.

Megafu, M. Publications: The fragility of statistical findings in distal radius fractures: a systematic review of randomized controlled trials, *Injury*. Presentations/abstracts: The fragility of statistical findings in meniscus repairs: a systematic review of randomized controlled trials.

Mehta, M. Presentations/abstracts: Parent perceptions on minimally invasive dentistry during the Covid-19 pandemic.

Melstrom, A.J. Presentations/abstracts: Blood-flow restriction: evidence to practice review.

Memar, S. Presentations/abstracts: Variations of the cystohepatic blood supply in American Midwestern cadavers.

Memar, SA. Publications: Dermatologic and ophthalmologic treatment of erythema multiforme major: a case report, *Cureus*. Luxatio erecta humeri after a ground-level fall in an elderly woman with a history of ipsilateral rotator cuff repair: a case report, *Cureus*.

Mendoza, V. Presentations/abstracts: Health education video development: improving health literacy in Afghan refugees to better navigate the US pharmacy system.

Merhavy, E. Presentations/abstracts: Qualities of ATSU DPT graduates identified as contributing factors to leadership in the physical therapy profession.

Merideth, D. Publications: A rare case of transient acantholytic dermatosis (AKA. Grover's disease) with concomitant pediculosis pubis: an atypical presentation and first documented case report, *Dermatopathology*. The impact of COVID-19 pandemic on dermatological conditions: a novel, comprehensive review, *Dermatopathology*.

Messieha, V. Publications: Regulation of bFGF-induced effects on rat aortic smooth muscle cells by β 3-adrenergic receptors, *Current Research in Pharmacology and Drug Discovery*. Presentations/abstracts: Interactions between β 3-adrenergic receptors and bFGF-induced effects in rat aortic smooth muscle cells. Regulation of bFGF-induced effects on rat aortic smooth muscle cells by β 3-ARs.

Meyer, J. Presentations/abstracts: Does macrophage stimulation by CCL5 alter melanoma migratory behavior?

Meyer, M. Presentations/abstracts: Pour some sugar on me: an analysis of diabetes telehealth follow-ups.

Meza, K. Presentations/abstracts: The use of dual inclinometry to measure cervical rotation: an assessment of validity and reliability.

Michael, H. Presentations/abstracts: Curricular changes to increase quality of healthcare for individuals with intellectual and developmental disabilities: combating health disparities by increasing inclusion in medical education.

Milanović, J. Publications: Audiology, an important contributor to interprofessional holistic care: an interprofessional collaborative case example, *American Journal of Audiology*.

Miles, C. Presentations/abstracts: Prevalence of carotid artery calcifications on digital panoramic radiographs of military veterans. Prevalence of carotid artery calcifications on military veterans' panoramic radiographs.

Milius, C. Presentations/abstracts: Development of hands-on skills in diagnostics of lung diseases using ultrasonography while reducing medical student contact with each other during the pandemic.

Millar, L. Presentations/abstracts: Curricular changes to increase quality of healthcare for individuals with intellectual and developmental disabilities: combating health disparities by increasing inclusion in medical education.

Miller, B. Presentations/abstracts: Aberrant middle colic and left hepatic arteries in a 76-year-old female.

Miller, L. Presentations/abstracts: Provider preferences regarding the benefits and challenges of utilizing telemedicine.

Millhouse, R. Presentations/abstracts: A retrospective study of OMM consults for hospitalized COVID-19 patients. FDM and OMT as an adjunct for acute sports-related ankle sprain. Improving the quality of diabetes management in a resident clinic setting. Review on stretching post exercise.

Mills, K. Presentations/abstracts: Occupational therapists assessment of patient barriers to rehabilitation adherence. OT in neurological rehabilitation: hemiplegic shoulder pain post-stroke.

Milovancev, L. Presentations/abstracts: Mental health workshops with high school students.

Minafee, T. Presentations/abstracts: Aberrant middle colic and left hepatic arteries in a 76-year-old female.

Miranda, J. Presentations/abstracts: How can occupational therapists intervene with women of child bearing age with vaginismus to improve participation in sexual activities?

Miranda-Cacdac, L. Publications: The use of interleukin 23 inhibitors in patients with chronic hepatitis B infection: a case series, *Journal of the American Academy of Dermatology Case Reports*. Presentations/abstracts: Provider preferences regarding the benefits and challenges of utilizing telemedicine.

Mitra, T. Presentations/abstracts: Prioritizing preventative health in older adults residing in long term care facilities through vaccination.

Moeller, A. Presentations/abstracts: Social circle of a medical student: influence on primary care choice.

Mohiuddin, M. Presentations/abstracts: Blood pressure screening of underserved individuals in southern Illinois.

Mok, H. Presentations/abstracts: Why patients do not follow through with behavioral health referrals: a quality improvement project on patient-perceived barriers in a community health care setting.

Monti, K. Publications: Test-retest reliability of the Vestibular Ocular Motor Screening (VOMS) tool and modified Balance Error Scoring System (mBESS) in US military personnel, *Journal of Science and Medicine in Sport*.

Mooney, T. Presentations/abstracts: Which occupation-based interventions improve postpartum mental health in mothers with infants in the neonatal intensive care unit?

Morales, S. Presentations/abstracts: CTS using ultrasound diagnostic measures. Distal radius fractures: comparing surgical approaches to identify functional outcomes.

Moran, R. Presentations/abstracts: The modified Thomas test: a narrative review.

Morgan, SL. Presentations/abstracts: Foundational and functional lower extremity program protocol with minimal to no equipment.

Morin, J. Presentations/abstracts: Hepatitis C treatment and management efficacy in a primary care setting.

Morris, Z. Presentations/abstracts: Prevalence of carotid artery calcifications on digital panoramic radiographs of military veterans. Prevalence of carotid artery calcifications on military veterans' panoramic radiographs.

Morrison, L. Publications: The e-sports athlete ergonomics: carpal tunnel and common injuries related to prolonged gaming, *Journal of Community Medicine and Public Health Reports*.

Morse, A.J. Presentations/abstracts: Defining adaptive sports experiences: a national survey of physical therapy and physical therapy assistant programs.

Motes, HC. Publications: Cytokine array analysis of mediators produced by human macrophages stimulated with *Trichomonas tenax*, *Experimental Parasitology*. Downregulation of miR-506-3p facilitates EGFR-TKI resistance through induction of sonic hedgehog signaling in non-small-cell lung cancer cell lines, *International Journal of Molecular Sciences*.

Mouwen, A. Publications: Treatment-resistant bipolar disorder managed with ketamine infusions as monotherapy, *Journal of the American Academy of Physician Assistants*.

Mudhar, PK. Publications: Knowledge, attitude, practices, and vaccine hesitancy among the Latinx community in Southern California early in the COVID-19 pandemic: cross-sectional study, *JMIR Formative Research*.

Mueller, G. Presentations/abstracts: Development of a clinician education module on hippotherapy with Parkinson's disease.

Muller, D. Presentations/abstracts: Near North Health quality improvement program: intimate partner violence education, awareness, and resources.

Mun, R. Presentations/abstracts: Mini docs: empowering Waianae coast adolescents to be advocates for their health and their community. Underestimation of disease burden among Native Hawaiian diabetes mellitus patients.

Mundh, G. Presentations/abstracts: Effectiveness of educational events on osteopathic medicine awareness amongst healthcare workers at Family HealthCare Network.

Muniz, B. Presentations/abstracts: Development of a shoulder screening and intervention program for collegiate baseball pitchers.

Muppala, N. Presentations/abstracts: Health education video development: improving health literacy in Afghan refugees to better navigate the US pharmacy system.

Murakami, A. Presentations/abstracts: Physical therapy pro-bono clinic and its impact on clinical experience readiness.

Murphy, P. Presentations/abstracts: Improving knowledge of services provided at the Family Support Center (FSC) of NYU-LH to increase ability to address social determinants of health.

Murphy, S. Presentations/abstracts: Improving the oral health of cancer patients through interprofessional education.

Murza, S. Presentations/abstracts: Development of a chairside multilingual oral health literacy assessment tool.

Muscato, N. Presentations/abstracts: Hygiene and sanitation needs of people experiencing homelessness in Portland, OR.

Muwanes, J. Presentations/abstracts: Determining average height and weight for the Mixteco-speaking pediatric population at the Community Healthcare Centers of the Central Coast.

Mwangi, T. Presentations/abstracts: Implementing the CRAFTT at family health centers (FHCs) at NYU Langone.

Nakamatsu, K. Presentations/abstracts: The impact of methamphetamine abuse and mental health outreach in high school students of O'ahu, Hawai'i.

Nakata, M. Presentations/abstracts: Perceived experience of participating in a virtual whole body drumming class for adults with PD.

Nam, A. Presentations/abstracts: Presence of xerostomia/dry mouth and management protocols amongst ATSU-MOSDOH patients: a pilot study.

Narlock, G. Presentations/abstracts: Near North Health quality improvement program: intimate partner violence education, awareness, and resources.

Nelson, A. Presentations/abstracts: Community connection: a compelling approach to teach opioid overdose prevention and harm reduction.

Nelson, M. Presentations/abstracts: Relationship between sensory impairment and gait performance following stroke.

Nettlow, R. Presentations/abstracts: Participation in adaptive sports programs: perceptions of the parent and child.

Newell, S. Presentations/abstracts: Regional body composition differences among college football players. Work capacity and estimation of 1RM bench press in athletes.

Newport, E. Presentations/abstracts: How can occupational therapists intervene with women of child bearing age with vaginismus to improve participation in sexual activities?

Newton, H. Presentations/abstracts: Excessive daytime sleepiness for OCOA patients at the ATSU/Affinia dental clinic in St. Louis.

Ngo, K. Presentations/abstracts: Interventions for work-related carpal tunnel syndrome.

Please note: Peer-reviewed journal publications, presentations, and abstracts are included as reported in the Fall 2020 through Supplement 2022 *ATSU Research* newsletters, prepared by Research Support. Individuals listed were ATSU students, fellows, and residents at the time publications, presentations, or abstracts were self-reported to Research Support.

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STUDENT SCHOLARLY ACTIVITY (September 2020-December 2022)

Ngo, K. Presentations/abstracts: Reviewing the medical utility of incorporating racial identifiers in common diagnostic tools.

NgoTran, A. Presentations/abstracts: Mental health workshops with high school students.

Nguyen, C. Presentations/abstracts: Dental student stress and coping.

Nguyen, HH. Presentations/abstracts: Cultural competency education of dental students and its impact on patient care: a qualitative study.

Nguyen, J. Presentations/abstracts: The modified Thomas test: a narrative review.

Nguyen, K. Presentations/abstracts: Presence of xerostomia/dry mouth and management protocols amongst ATSU-MOSDOH patients: a pilot study.

Nguyen, N. Presentations/abstracts: Addressing barriers to osteopathic medical students obtaining research. Community centered approach to educating mothers on health-related topics.

Nguyen, N. Presentations/abstracts: Focus group model for collaborative health education with refugees in King County, WA.

Nguyen, V. Presentations/abstracts: Oral manifestations of patients self-disclosing cannabis use at the St. Louis Dental Center.

Nguyen-Guo, T. Presentations/abstracts: Addressing food insecurity by increasing awareness of local resources in Centreville, Illinois. Combating racism in future medical practice: integration of inclusive dermatology toolkit into undergraduate medical education.

Nielson, K. Presentations/abstracts: Interventions for work-related carpal tunnel syndrome.

Nies, S. Presentations/abstracts: Improving knowledge of services provided at the Family Support Center (FSC) of NYU-LH to increase ability to address social determinants of health.

Nimblett-Clarke, A. Publications: The role of vaccine exemptions in the resurgence of measles, *Journal of the American Academy of Physician Assistants*. Presentations/abstracts: Classroom assessment techniques in physician assistant education: improving learning gains.

Nodarse, L. Presentations/abstracts: Oral manifestations of patients self-disclosing cannabis use at the St. Louis Dental Center.

Nolan, A. Presentations/abstracts: Mental health workshops with high school students.

Nordbye, J. Presentations/abstracts: Mini docs: a novel online course delivery to empower student advocates for SARS-CoV-2 safety on Oahu.

Norstrom, J. Presentations/abstracts: Self-reported driving habits and their relationship to measures of dual task mobility, attention, and cognition in PD.

Nouri-Nikbakht, R. Publications: The impact of vaginal microbiome composition, race, and immunological factors on preterm birth, *Reviews and Research in Medical Microbiology*. Presentations/abstracts: Preparing for pandemics: lesson plan design for elementary-aged children.

Nowamooz, N. Presentations/abstracts: Dental students' perceptions and preparedness to counsel patients about e-cigarette use and vaping.

Nuñez, D. Presentations/abstracts: Incarcerated adults and community reintegration.

O'Ryan, L. Presentations/abstracts: How to better manage special needs patients in a dental setting.

O'Toole, K. Presentations/abstracts: Incarcerated adults and community reintegration.

Oalickal, A. Presentations/abstracts: Pour some sugar on me: an analysis of diabetes telehealth follow-ups.

Ogbanga, B. Presentations/abstracts: Discussion group: making your voice heard in a professional climate.

Olabamiji, S. Presentations/abstracts: Evaluation of intimate partner violence screening for pregnant women at Near North Health Services Corporation (NNHSC).

Olsen, R. Publications: Mucocutaneous drug reaction after treatment with Phosphatidylinositol-3-kinase inhibitor, *Journal of the American Academy of Dermatology Case Reports*.

Omar, T. Publications: Can a digital ear otoscope improve anatomical recognition of the inner ear landmarks, comfort and confidence in first year medical students? *Journal of Osteopathic Medicine*. Presentations/abstracts: Near North Health quality improvement program: intimate partner violence education, awareness, and resources.

Ong, K. Presentations/abstracts: Mindfulness-based interventions in addressing negative health outcomes related to adverse childhood experiences.

Ong, L. Presentations/abstracts: Twists, turns, and blockages to colorectal screening follow-up.

Oro, P. Publications: A rare case of transient acantholytic dermatosis (AKA. Grover's disease) with concomitant pediculosis pubis: an atypical presentation and first documented case report, *Dermatopathology*. Advocacy for change: an osteopathic review of traumatic brain injury among combat veterans, *Cureus*. Application of aspiration-assisted percutaneous venous removal of right atrial thrombus in a critically ill patient: a case study and clinical management overview, *Cureus*. The impact of COVID-19 pandemic on dermatological conditions: a novel, comprehensive review, *Dermatopathology*. Presentations/abstracts: A call to action: VA pilot program addressing the suicide epidemic in the veteran population. Examining patient and provider perspectives of telemedicine in a community health clinic setting.

Ortiz, AM. Presentations/abstracts: A protocol for dynamic body-weight support gait training to improve walking parameters after chronic stroke.

Oska, C. Publications: Provider perspective: carpal tunnel's association with hypothyroidism, *Practical Pain Management*.

Oster, M. Presentations/abstracts: How can occupational therapists better facilitate feeding interventions and family training post-NICU discharge to produce the best health outcomes for infants?

Owen, N. Presentations/abstracts: Hemarthrosis caused by infrapatellar plica injury.

Pace, H. Presentations/abstracts: Non-pharmacological sleep interventions and its effects on sleep quality.

Pace, P. Presentations/abstracts: A protocol for dynamic body-weight support gait training to improve walking parameters after chronic stroke.

Pacleb, E. Presentations/abstracts: Implementing the CRAFFT at family health centers (FHCs) at NYU Langone.

Paik-Tesch, E. Presentations/abstracts: Blood pressure screening of underserved individuals in southern Illinois.

Palmer, J. Publications: SATB2 and MDM2 Immunoexpression and diagnostic role in primary osteosarcomas of the jaw, *Dentistry Journal*. Presentations/abstracts: SATB2 and MDM2 immunoexpression and diagnostic role in primary osteosarcomas of the jaw.

Paragas, P. Presentations/abstracts: Why patients do not follow through with behavioral health referrals: a quality improvement project on patient-perceived barriers in a community health care setting.

Parker, S. Presentations/abstracts: Association between cognitive test anxiety scale and poor COMSAE Phase 1 scores.

Paster, IC. Publications: Association of total lifetime breastfeeding duration with midlife handgrip strength: findings from Project Viva, *BMC Women's Health*. Presentations/abstracts: Misinformation nation:



Teaching & Learning Center

ATSU's Teaching & Learning Center (TLC) is an innovative, University-wide resource promoting teaching excellence, development opportunities, and activities across all programs. Don't miss out on these annual opportunities to develop your teaching practices!

INTRODUCTION TO EDUCATIONAL TECHNOLOGY FOR EDUCATORS

Learn foundational digital literacy skills to enhance efficiency and instructional content using technology. This six-week course (March-May) offers experience with the following technology:

- PowerPoint, basic digital search engines.
- Google Docs, Slides, Calendar, and Drive.
- Zoom, Screencast-o-matic, and Echo360.
- Poll Everywhere and Canvas learning management system.

COURSE DESIGN INSTITUTE

Learn about course design and apply evidence-based methods to developing or revising courses. This seven-week course (July-September) engages participants in applying the following theories and principles as they develop their own course design blueprint:

- Contemporary teaching approaches for online, hybrid, and in-person modalities.
- Equitable and inclusive course design and activities.
- Measurable student-centered learning outcomes aligned with assessments and engaging learning experiences.
- Methods for providing and receiving instructional feedback.

INTRODUCTION TO EDUCATIONAL RESEARCH COURSE

Learn about educational research methods and develop an educational research agenda. This eight-week course (October-December) provides an introduction to a foundational educational research process:

- Overview of the research process.
- Formation of research questions.
- Basics of conducting literature reviews.
- Types of research methods.
- Data collection procedures.
- Common data analysis techniques.
- Identification of funding sources.
- Research ethics.

Please note: Peer-reviewed journal publications, presentations, and abstracts are included as reported in the Fall 2020 through Supplement 2022 *ATSU Research* newsletters, prepared by Research Support. Individuals listed were ATSU students, fellows, and residents at the time publications, presentations, or abstracts were self-reported to Research Support.



To learn more about the TLC's resources and programs, visit atsu.edu/tlc or email tlc@atsu.edu

ATSU | TEACHING & LEARNING CENTER

STUDENT SCHOLARLY ACTIVITY (September 2020-December 2022)

examining COVID-19 vaccine hesitancy and misinformation among parents of pediatric patients.

Pate, JD. Publications: Eradication of papillary thyroid carcinoma in a patient receiving pemetrexed and bevacizumab, *AACE Clinical Case Reports*.

Patel, A. Presentations/abstracts: Parent perceptions on minimally invasive dentistry during the Covid-19 pandemic.

Patel, K. Presentations/abstracts: Assessment of LGBTQ knowledge and attitudes among health care student clinicians: a pilot study.

Patel, P. Presentations/abstracts: Emotional health of ATSU medical and dental students in the era of COVID-19.

Patel, S. Presentations/abstracts: Health education video development: improving health literacy in Afghan refugees to better navigate the US pharmacy system. Improving knowledge of services provided at the Family Support Center (FSC) of NYU-LH to increase ability to address social determinants of health.

Patterson, J. Presentations/abstracts: Non-pharmacological sleep interventions and its effects on sleep quality.

Patterson, S. Presentations/abstracts: Improving the oral health of cancer patients through interprofessional education.

Pavelka, R. Presentations/abstracts: Approaches to nutritional health awareness and first aid in students with special needs.

Payne, M. Presentations/abstracts: Qualities of ATSU DPT graduates identified as contributing factors to leadership in the physical therapy profession.

Pearson, M. Presentations/abstracts: COVID-19's effect on parent's perception of dental treatment.

Pearson, P. Presentations/abstracts: Prevalence of carotid artery calcifications on digital panoramic radiographs of military veterans. Prevalence of carotid artery calcifications on military veterans' panoramic radiographs.

Pelia, A. Presentations/abstracts: Evaluation of intimate partner violence screening for pregnant women at Near North Health Services Corporation (NNHSC).

Pena, A. Presentations/abstracts: QI: return to learn protocol for the college setting.

Pendlebury, G. Publications: Polytrauma: managing PTSD and comorbid pain in veterans, *Psycom Pro*.

Penning, J. Presentations/abstracts: How maternal employment affects duration of breastfeeding: a systematic review. Pediatric feeding interventions across a variety of diagnoses.

Perez, D. Presentations/abstracts: COVID-19 vaccine hesitancy amongst adult patients at Adelante Healthcare in Maricopa County, AZ.

Perez, K. Presentations/abstracts: Mini docs: empowering Waianae coast adolescents to be advocates for their health and their community.

Peterson, A. Presentations/abstracts: Twists, turns, and blockages to colorectal screening follow-up.

Peterson, M. Presentations/abstracts: Locomotor and cognitive effects of high intensity gait training in early post-stroke rehabilitation.

Pfeuffer, J. Presentations/abstracts: Cannabis use and oral health study.

Pham, J. Presentations/abstracts: M0 and M1 macrophage phagocytosis of melanoma and Jurkat cells.

Pham, STD. Publications: Mycotic intrarenal aortic aneurysm due to mycobacterium after intravesical treatment for bladder cancer, *Journal of Vascular Surgery Cases, Innovations and Techniques*.

Phan, J. Presentations/abstracts: The impact of confounding factors on periodontal health of patients with removable partial dentures. Impact of removable partial dentures on periodontal health of patients.

Phan, K. Presentations/abstracts: Blood pressure screening of underserved individuals in southern Illinois.

Phan, M. Presentations/abstracts: Blood pressure screening of underserved individuals in southern Illinois.

Phan, V. Presentations/abstracts: Mindfulness-based interventions in addressing negative health outcomes related to adverse childhood experiences.

Phillips, C. Presentations/abstracts: Regulation of PDGF-induced effects on rat aortic smooth muscle cells by β 3-ARs.

Phillips, W. Presentations/abstracts: Mini docs: a novel online course delivery to empower student advocates for SARS-CoV-2 safety on Oahu.

Philpot, N. Presentations/abstracts: Preceptors' perceptions of contemporary expertise.

Pierce, J. Presentations/abstracts: Patient, injury, and treatment characteristics of low back pain managed by athletic trainers: a report from the Athletic Training Practice-Based Research Network.

Pizarek, D. Presentations/abstracts: Colorectal cancer screening compliance in Community Health Centers of the Central Coast (CHCCC).

Poppe, B. Publications: Never-frozen liquid plasma transfusion in civilian trauma: a nationwide propensity-matched analysis, *The Journal of Trauma and Acute Care Surgery*. Presentations/abstracts: Pour some sugar on me: an analysis of diabetes telehealth follow-ups.

Porter, D. Presentations/abstracts: Our experience with action research: managing patient with low back pain.

Postol, A. Presentations/abstracts: Improving the quality of diabetes management in a resident clinic setting.

Powell, S. Presentations/abstracts: Improving the oral health of cancer patients through interprofessional education.

Powless, KA. Presentations/abstracts: Establishing value of athletic trainers in the secondary school setting.

Prakash, N. Publications: Inflammatory cloacogenic polyp: a rare benign colorectal polyp, *Cureus*.

Preston, P. Publications: The orbitalauricular chord of Alligator: the unusual functional linkage between the earflap and eyelid of Crocodylians, *Journal of Anatomy*.

Previti, K. Presentations/abstracts: A parental dyad experience of having a child diagnosed with autism. Encouraging self-regulation and resilience through yoga and mindfulness.

Priest Wood, S. Presentations/abstracts: Improving the quality of diabetes management in a resident clinic setting. Optimizing diabetes management in an outpatient setting.

Puzey, T. Presentations/abstracts: Inhibition of Escherichia coli ATP synthase by dietary date phenolics.

Pyle, R. Presentations/abstracts: The customization and trends associated with biological width observed utilizing combination scan technique.

Quintero, D. Presentations/abstracts: Blood pressure screening of underserved individuals in southern Illinois.

Rabat, S. Publications: A case report on an underappreciated cause of heart failure: chronic viral myocarditis, *Cureus*. Fish hook as foreign body: not all foreign bodies can be fished out of the esophagus with endoscopy alone, *Cureus*. Prioritizing preventative health in older adults residing in long-term care facilities through vaccination, *Journal of Osteopathic Medicine*. Presentations/abstracts: Prioritizing preventative health in older adults residing in long term care facilities through vaccination.

Raheem, S. Presentations/abstracts: Addressing food insecurity by increasing awareness of local resources in Centreville, Illinois. The compensatory effects of α Val-345 in the catalytic sites of ATP synthase.

Ralph, J. Presentations/abstracts: The influence of socioeconomic status on concussion recovery time in high school athletes.

Ramaraj, P. Presentations/abstracts: Is testosterone responsible for increased male mortality in melanoma?

Rana, R. Presentations/abstracts: Nasotracheal intubation vs nasopharyngeal (open) airway: understating dental provider preferences.

Rasmussen, J. Presentations/abstracts: Focus group model for collaborative health education with refugees in King County, WA.

Rataul, S. Presentations/abstracts: Role of artificial intelligence in dentistry.

Reagan, S. Presentations/abstracts: Silver diamine fluoride usage in the St. Louis Dental Center.

Reaser, A. Presentations/abstracts: Attention and multi-limb dual-task control during simulated driving in Parkinson's disease. Evidence-based interventions for cognitive rehabilitation post-stroke: a mapping review. Relationship of self-reported driving habits with attention and cognition in people with Parkinson's disease.

Reay, L. Presentations/abstracts: Interproximal contact loss between implant and adjacent tooth.

Reed, G. Presentations/abstracts: Cannabis use and oral health study.

Reick-Mitrisin, V. Publications: A breast imaging case of steatocystoma multiplex: a rare condition involving multiple anatomic regions, *Cureus*. Acute pancreatitis in a patient with recent history of SARS-CoV-2 infection, *Cureus*.

Restemayer, A. Presentations/abstracts: Provider preferences regarding the benefits and challenges of utilizing telemedicine.

Reznik, R. Presentations/abstracts: Examining patient and provider perspectives of telemedicine in a community health clinic setting.

Richardson, E. Presentations/abstracts: Implementing an aging in place program for accessible and safe homes to support older adults living in the community.

Rieth, K. Presentations/abstracts: Anti-biofilm efficacy of 4 agents: a comparative study between 2 approaches.

Rim, P. Presentations/abstracts: Mini docs: a novel online course delivery to empower student advocates for SARS-CoV-2 safety on Oahu.

Rivas, A. Presentations/abstracts: Evidence-based interventions for cognitive rehabilitation post-stroke: a mapping review. The role of occupational therapy within primary care: a multidisciplinary weight management program.

Rivera, D. Presentations/abstracts: Preparing for pandemics: lesson plan design for elementary-aged children.

Rivera, L. Presentations/abstracts: Sensory programming with Piller Child Development. The role of occupational therapy in an outpatient multidisciplinary concussion clinic: persistent post concussion symptoms.

Rivera, P. Presentations/abstracts: Evaluation of polishing systems for CAD/CAM polymer infiltrated ceramic network restoration.

Rizzo, C. Presentations/abstracts: Preceptors' perceptions of student competence in athletic training.

Roberts, B. Publications: Effect of occipitoatlantal decompression on cerebral blood flow dynamics as evaluated by Doppler ultrasonography, *Journal of the American Osteopathic Association*. New-onset ulcerative colitis in a young Caucasian woman with unclassified arteritis, *Case Reports in Vascular Medicine*.

Roberts, C. Presentations/abstracts: Participation in adaptive sports programs: perceptions of the parent and child.

Roberts, W. Presentations/abstracts: Cloning and expression of PG_{RS02100} protein in *Porphyromonas gingivalis*. P. gingivalis T9S5 and

DPPs are linked to dysregulation of VSMC plasticity. Statewide survey of ticks and tick-borne pathogens.

Robinson, M. Presentations/abstracts: Which occupation-based interventions improve postpartum mental health in mothers with infants in the neonatal intensive care unit?

Rocimo, CM. Presentations/abstracts: Mini docs: a novel online course delivery to empower student advocates for SARS-CoV-2 safety on Oahu.

Rodriguez, R. Presentations/abstracts: Epidemiology of shoulder dislocations presenting to emergency departments in the United States, 2007-2020.

Rogers, A. Presentations/abstracts: Correlation of surface topography volume and spirometry tidal volume.

Rogge, J. Presentations/abstracts: PARS knotless mid-substance jig system for an Achilles rupture surgical repair for a 22-year-old collegiate indoor and beach volleyball player: an exploratory case study.

Rogowski, L. Publications: Implementation of teledentistry for orthodontic practices, *Journal of the World Federation of Orthodontists*. Teledentistry platforms for orthodontics, *Journal of Clinical Pediatric Dentistry*.

Romer, E. Presentations/abstracts: The relationship between sensory impairment and gait performance in adults: a review.

Rosas-Ojeda, MDC. Presentations/abstracts: Developing a resource for optimizing occupational engagement in adults with dementia.

Roseth, J. Presentations/abstracts: Analysis of interproximal contact loss between fixed implant crowns and adjacent teeth.

Routson, K. Presentations/abstracts: Evaluating health knowledge, literacy, and activity levels of elementary students through the Nutrition and Health Awareness program.

Roy, D. Presentations/abstracts: Oxidative stress induced by oxysterols in the brain endothelial cells.

Rubin, S. Presentations/abstracts: Evaluation of intimate partner violence screening for pregnant women at Near North Health Services Corporation (NNHSC).

Ruden, E. Presentations/abstracts: Morphometric analysis of pyramidalis muscle in Midwestern Americans.

Russell, K. Presentations/abstracts: Reference values in individuals without disabilities for activity limitation tests used in para-athletics classification.

Ruzan, I. Presentations/abstracts: Reference values in individuals without disabilities for activity limitation tests used in para-athletics classification.

Ryu, HJ. Publications: Altered structural covariance of insula, cerebellum and prefrontal cortex is associated with somatic symptom levels in irritable bowel syndrome (IBS), *Brain Sciences*. Presentations/abstracts: The impact of methamphetamine abuse and mental health outreach in high school students of O'ahu, Hawai'i.

Saad, M. Presentations/abstracts: Addressing barriers to osteopathic medical students obtaining research. Community centered approach to educating mothers on health-related topics.

Sabbah, S. Presentations/abstracts: The LABOR study: labor length and birth outcomes osteopathic research.

Sadeghi, A. Presentations/abstracts: Improving knowledge of services provided at the Family Support Center (FSC) of NYU-LH to increase ability to address social determinants of health.

Sainbayar, E. Publications: Efficacy of implementing intermittent STOP THE BLEED® reviews on long term retention of hemorrhage control skills of first year medical students, *Journal of Osteopathic Medicine*.

Sainbayar, S. Presentations/abstracts: Preparing for pandemics: lesson plan design for elementary-aged children.

Saitis, T. Presentations/abstracts: Inhibition of Escherichia coli ATP synthase by shikonin and alkannin.

Please note: Peer-reviewed journal publications, presentations, and abstracts are included as reported in the Fall 2020 through Supplement 2022 *ATSU Research* newsletters, prepared by Research Support. Individuals listed were ATSU students, fellows, and residents at the time publications, presentations, or abstracts were self-reported to Research Support.

Please note: Peer-reviewed journal publications, presentations, and abstracts are included as reported in the Fall 2020 through Supplement 2022 *ATSU Research* newsletters, prepared by Research Support. Individuals listed were ATSU students, fellows, and residents at the time publications, presentations, or abstracts were self-reported to Research Support.

STUDENT SCHOLARLY ACTIVITY (September 2020-December 2022)

Salam, A. Presentations/abstracts: Mental health workshops with high school students.

Salazar, Y. Presentations/abstracts: Virtual health and wellness program for elementary students.

Saleh, J. Presentations/abstracts: Effectiveness of educational events on osteopathic medicine awareness amongst healthcare workers at Family HealthCare Network.

Saleh, M. Presentations/abstracts: Hygiene and sanitation needs of people experiencing homelessness in Portland, OR.

Salti, H. Presentations/abstracts: Health education video development: improving health literacy in Afghan refugees to better navigate the US pharmacy system.

Samaniego, A. Presentations/abstracts: Misinformation nation: examining COVID-19 vaccine hesitancy and misinformation among parents of pediatric patients.

Samboju, V. Presentations/abstracts: Hygiene and sanitation needs of people experiencing homelessness in Portland, OR.

Sammis, T. Presentations/abstracts: Reducing the time to find medical supplies among medical students. Retrospective analysis of NRMCC SARS-COV2 inpatient hospitalizations.

Sanchez, I. Presentations/abstracts: Participation in adaptive sports programs: perceptions of the parent and child.

Sanders, K. Presentations/abstracts: The impact of methamphetamine abuse and mental health outreach in high school students of O'ahu, Hawai'i.

Sanders, Z. Presentations/abstracts: Preparing for pandemics: lesson plan design for elementary-aged children.

Sandhu, H. Presentations/abstracts: Effectiveness of educational events on osteopathic medicine awareness amongst healthcare workers at Family HealthCare Network.

Santiago, K. Presentations/abstracts: Which occupation-based interventions improve postpartum mental health in mothers with infants in the neonatal intensive care unit?

Santoro, Z. Presentations/abstracts: Assessment of cannabis use among dental urgent care patients.

Santos, K. Presentations/abstracts: What is the effect of music on cognitive skills in patients with dementia?

Sapre, K. Presentations/abstracts: Sickle cell disease pain management: addressing racism and discrimination.

Sapwell, J. Presentations/abstracts: Gingival health status of children and adolescent juvenile offenders: a periodontal needs assessment.

Sassounian, N. Publications: Prevention of external auditory canal exostosis in the Colorado whitewater community, *Journal of Osteopathic Medicine*. Presentations/abstracts: Why patients do not follow through with behavioral health referrals: a quality improvement project on patient-perceived barriers in a community health care setting.

Saunders, B. Presentations/abstracts: Misinformation nation: examining COVID-19 vaccine hesitancy and misinformation among parents of pediatric patients.

Saylor, D. Presentations/abstracts: Near North Health quality improvement program: intimate partner violence education, awareness, and resources.

Schmitz, E. Presentations/abstracts: Clinical variability of six-minute walk test protocols by licensed physical therapists: a survey.

Schmitz, H. Presentations/abstracts: Oxidation to a respiratory brainstem area in an Alzheimer's rat model.

Schoenfuss, ES. Publications: Diagnosis, management, and prevention of acute rheumatic fever in the United States, *Journal of the American Academy of Physician Assistants*.

Schubert, B. Presentations/abstracts: Analysis of variation in the obturator artery in Midwestern donor bodies. Immunohistochemical analysis of MTHFR in rat and human eyes. Morphometric analysis of pyramidalis muscle in Midwestern Americans. Protective effects of melatonin on elevated homocysteine in human RPE cells.

Schuler, D. Presentations/abstracts: Difficult conversations in various physical therapy settings: pilot study.

Scott, K. Presentations/abstracts: Exploring the effects of physician-in-training burnout on quality of patient care.

Sears, K. Presentations/abstracts: An evidence-based recommendation for developing an early phase hip rehabilitation research design.

Seemann, E. Presentations/abstracts: Regulation of PDGF-induced effects on rat aortic smooth muscle cells by β 3-ARs.

Seng, A. Presentations/abstracts: Effectiveness of educational events on osteopathic medicine awareness amongst healthcare workers at Family HealthCare Network.

Senger, B. Publications: Dermatologic and ophthalmologic treatment of erythema multiforme major: a case report, *Cureus*. Impact of osteopathic manipulative techniques on the management of dizziness caused by neuro-otologic disorders: protocol for systematic review and meta-analysis, *International Journal of Osteopathic Medicine*. Presentations/abstracts: Is testosterone responsible for increased male mortality?

Serrano, E. Presentations/abstracts: Orthodontic assistant retention: which office benefit has the best prognosis for maintaining orthodontic staff?

Shafer, M. Presentations/abstracts: Improving knowledge of services provided at the Family Support Center (FSC) of NYU-LH to increase ability to address social determinants of health.

Shah, N. Presentations/abstracts: Pour some sugar on me: an analysis of diabetes telehealth follow-ups.

Sharif, A. Presentations/abstracts: Hygiene and sanitation needs of people experiencing homelessness in Portland, OR.

Sharp, S. Presentations/abstracts: Spatial and temporal parameters in para athletes competing in classes T53 and T54.

Shaw, D. Presentations/abstracts: Role of β 3-adrenergic receptors (β 3-ARs) in vascular injury-induced neointima formation.

Shaw, J. Publications: MAML2-Rearranged mucoepidermoid carcinoma of the parotid gland: a report in a 20-month-old toddler, *Case Reports in Dentistry*.

Shelton, T. Presentations/abstracts: Cardiovascular screening in high school athletes.

Sherman, T. Presentations/abstracts: Locomotor and cognitive effects of high intensity gait training in early post-stroke rehabilitation.

Sheth, K. Presentations/abstracts: Mental health workshops with high school students.

Shinkle, R. Presentations/abstracts: Incarcerated adults and community reintegration.

Shipman, M. Presentations/abstracts: Addressing food insecurity by increasing awareness of local resources in Centreville, Illinois.

Short, C. Presentations/abstracts: Do different configurations of the 6MWT impact distance traveled in people with Parkinson's disease?

Shuck, ST. Presentations/abstracts: Silver diamine fluoride usage in the St. Louis Dental Center.

Shumway, DO. Presentations/abstracts: Association between cognitive test anxiety scale and poor COMSAE Phase 1 scores.

Siarov, J. Presentations/abstracts: Prediction of balance and gait recovery six months and beyond stroke.

Siddeek, E. Presentations/abstracts: Ketamine assisted OMT for the treatment of chronic low back pain.

Silva, A. Presentations/abstracts: Prioritizing preventative health in older adults residing in long term care facilities through vaccination.

Silva, K. Presentations/abstracts: Educational benefits of meaningful engagement with international communities. Twists, turns, and blockages to colorectal screening follow-up.

Silver, R. Presentations/abstracts: Clinical practice guideline development for chemotherapy-induced peripheral neuropathy rehabilitation. Evidence-based interventions for cognitive rehabilitation post-stroke: a mapping review.

Simmons, J. Presentations/abstracts: Assessing barriers: why tobacco dependence treatment does not occur in the dental clinic.

Simonsen, J. Presentations/abstracts: Analysis of interproximal contact loss between fixed implant crowns and adjacent teeth.

Singh, H. Publications: Recurrent ganglioneuroma in PTPN11-associated Noonan syndrome: a case report and literature review, *American Journal of Medical Genetics*. Presentations/abstracts: Provider preferences regarding the benefits and challenges of utilizing telemedicine.

Singhal, A. Presentations/abstracts: Examining patient and provider perspectives of telemedicine in a community health clinic setting.

Skeens, R. Presentations/abstracts: Mental health workshops with high school students.

Skerry, K. Presentations/abstracts: Effect of haptic feedback with single and dual tasks on gait in people with Parkinson's disease.

Skiba, G. Presentations/abstracts: KFM continuity of care and patient retention QI project.

Skinner, AG. Presentations/abstracts: Effects of inulin on intestinal barrier function in a Caco-2 cell monolayer model of intestinal barrier. Inulin protects intestinal epithelial cells from LPS-induced inflammation. Inulin protects intestine from LPS induced gut barrier damage.

Slim, T. Presentations/abstracts: PT student supervision: overview of supervision definitions and ratios by state and territories.

Smith, C. Presentations/abstracts: Reliability and validity of measuring cervical range of motion with dual inclinometry.

Smith, R. Presentations/abstracts: Development of medial tibial stress syndrome injury prevention program. Including multi-item patient-reported outcome measures in the management of patients: a quality improvement project.

Snider, E. Presentations/abstracts: Interprofessional team meeting value in a lifestyle medicine program.

Snyder, B. Presentations/abstracts: Secondary athletic trainers' perceptions to concussion care in management along the US/Mexico border.

Soest, A. Presentations/abstracts: Outcome measures: knowledge translation of APTA clinical practice guidelines to practicing physical therapists.

Solano, L. Publications: Seven facts you need to know about continuous glucose monitors, *Journal of the American Academy of Physician Assistants*.

Spadafora, AR. Presentations/abstracts: Development of a return-to-learn protocol in the secondary school setting.

Sparks, J. Presentations/abstracts: Identification of an extracellular inhibitor of persistence in *S. aureus*.

Spearman, M. Presentations/abstracts: Reliability and validity of a new floor transfer test for people with Parkinson's disease.

Speck, H. Presentations/abstracts: Delivery of dental care and quality of life for older adults.

Speechley, J. Presentations/abstracts: Curricular changes to increase quality of healthcare for individuals with intellectual and developmental disabilities: combating health disparities by increasing inclusion in medical education.

Spicer, JL. Publications: Retroperitoneal liposarcoma: an unusual presentation of a rare cancer, *Journal of the Advanced Practitioner in Oncology*.

Spotskey, M. Presentations/abstracts: Implementation of functional cognition screening tool and program development in an inpatient rehabilitation setting.

Srinivasan, D. Publications: Can a digital ear otoscope improve anatomical recognition of the inner ear landmarks, comfort and confidence in first year medical students? *Journal of Osteopathic Medicine*. Presentations/abstracts: Examining patient and provider perspectives of telemedicine in a community health clinic setting.

Srivastava, S. Presentations/abstracts: COVID-19 vaccine hesitancy amongst adult patients at Adelante Healthcare in Maricopa County, AZ.

Stanfield, B. Presentations/abstracts: Dose-response to ketamine as an antidepressant in juvenile rats. Investigating ketamine as a rapid-acting antidepressant in juvenile rats. Ketamine induces anxiety-like effects in juvenile rats.

Staputyte, K. Presentations/abstracts: Characterization of polarized macrophage-melanoma cell interactions.

Stayton, M. Presentations/abstracts: ATSU-MOSDOH Smiles for Veterans program. Dentures for Veterans program assessment: database creation.

Stegelmeier, P. Presentations/abstracts: Intracortical diaphyseal chondroblastoma: report of a rare entity. Trends of stroke and vaccination status in different SARS-CoV-2 waves.

Steiner, A. Presentations/abstracts: Potential SARS-CoV-2 sequelae: new onset atrial fibrillation.

Steinhour, A. Publications: Appropriate prescribing of dental prophylaxis in patients with orthopedic implants, *Journal of the American Academy of Physician Assistants*.

Stephenson, A. Presentations/abstracts: Addressing food insecurity by increasing awareness of local resources in Centreville, Illinois.

Stewart, A. Presentations/abstracts: Oral health related quality of life: the impact of removable dental prosthesis on elderly patients.

Stogner, E. Presentations/abstracts: A rare complication of HELLP in a pregnant homeless woman: a case report. Mental health workshops with high school students.

Straughter, S. Presentations/abstracts: QI: education and implementing best return to learn strategies in collegiate athletics.

Strout, NR. Presentations/abstracts: Athletic trainers' experiences developing and maintaining contemporary expertise.

Stuart, C. Presentations/abstracts: Carbonic anhydrase inhibition does not affect fatigue or force generation. Measurement of intravascular PO2 in the rat kidney: proof of concept.

Sturgell, J. Presentations/abstracts: Hepatitis C treatment and management efficacy in a primary care setting.

Sudaj, G. Publications: Neurodegenerative diseases and the auditory-vestibular system, *Hearing Journal*.

Suh, HJ. Presentations/abstracts: Expression of glial cell markers in control and diabetic rat retinas.

Suh, T. Presentations/abstracts: Immunohistochemical analysis of MTHFR in rat and human eyes. Role of β 3-adrenergic receptors (β 3-ARs) in vascular injury-induced neointima formation.

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STUDENT SCHOLARLY ACTIVITY (September 2020-December 2022)

Suhardjo, J. Presentations/abstracts: High-resolution ultrasound imaging for temporomandibular joint disorder assessment.

Sultan, R. Publications: Can a digital ear otoscope improve anatomical recognition of the inner ear landmarks, comfort and confidence in first year medical students? *Journal of Osteopathic Medicine*. Presentations/abstracts: Virtual health and wellness program for elementary students.

Sutherland, C. Presentations/abstracts: The economic and hourly impacts of teledentistry on suburban patients

Sutton, H. Presentations/abstracts: Participation in adaptive sports programs: perceptions of the parent and child.

Suyematsu, N. Presentations/abstracts: Reference values in individuals without disabilities for activity limitation tests used in para-athletics classification.

Swanson, A. Presentations/abstracts: How to better manage special needs patients in a dental setting.

Swanson, T. Presentations/abstracts: Pour some sugar on me: an analysis of diabetes telehealth follow-ups.

Sy, E. Presentations/abstracts: Hygiene and sanitation needs of people experiencing homelessness in Portland, OR.

Syed, TH. Presentations/abstracts: Silver diamine fluoride usage in the St. Louis Dental Center.

Tadros, S. Publications: HMGA2 Immunoeexpression is frequent in salivary gland pleomorphic adenoma: immunohistochemical and molecular analyses of PLAG1 and HMGA2 in 25 cases, *International Journal of Clinical & Experimental Pathology*. Presentations/abstracts: HMGA2 immunoeexpression is frequent in salivary gland pleomorphic adenoma: immunohistochemical and molecular analyses of PLAG1 and HMGA2 in 25 cases.

Talesh, T. Presentations/abstracts: Accuracy, reliability, and clinical feasibility of AI-assisted remote orthodontic tooth monitoring technology.

Tan, A. Presentations/abstracts: Addressing food insecurity by increasing awareness of local resources in Centreville, Illinois.

Tang, R. Presentations/abstracts: Implementing the CRAFT at family health centers (FHCs) at NYU Langone.

Tanyag, VC. Presentations/abstracts: The effects of a teletherapy follow-up education program on the quality of life and self-management of lymphedema among breast cancer patients.

Tariq, M. Presentations/abstracts: Vitamin D3 prevents LPS-induced apoptosis and proliferation in IECs.

Taylor, Z. Presentations/abstracts: Cerebrospinal fluid pressure is significantly influenced by movement. The influence of venous blood on lumbar cerebrospinal fluid pressure.

Temnyk, K. Presentations/abstracts: Spatial and temporal parameters in para athletes competing in classes T53 and T54.

Terrell, S. Presentations/abstracts: Curricular changes to increase quality of healthcare for individuals with intellectual and developmental disabilities: combating health disparities by increasing inclusion in medical education. Presentations/abstracts: Expression of SARS-CoV-2-RBD in melanoma cells with messenger RNA.

Thomas, J. Presentations/abstracts: The effects of cannabis use on oral health.

Thomas, K. Presentations/abstracts: Excessive daytime sleepiness for OCOA patients at the ATSU/Affinia dental clinic in St. Louis.

Thompson, M. Presentations/abstracts: Importance of defining the social and cultural identity of college students for improved well-being on campus. Improving the quality of diabetes management in a resident clinic setting. Optimizing diabetes management in an outpatient setting.

Thompson, SP. Presentations/abstracts: Transitioning into athletic training practice: changes in clinical practice behaviors, knowledge, skills, and confidence.

Thorndal, C. Presentations/abstracts: Cytokine analysis of mice vaccinated with *S. aureus* autolysin protein ATL. Potential of the autolysin protein ATL as a vaccine candidate in protection.

Thueson, R. Presentations/abstracts: Oral health related quality of life: the impact of removable dental prosthesis on elderly patients.

Timlin, J. Presentations/abstracts: Descriptive analysis of injuries and treatments during a single high school football season.

Tipton, R. Presentations/abstracts: Glutamatergic signaling in a rat model of Alzheimer's disease (AD). nTS Glutamate signaling in the chemoreflex axis of an Alzheimer's disease rat model. nTS glutamatergic signaling in a rat model of Alzheimer's disease.

Tjong, E. Publications: Knee pain and function: nonoperative approaches to managing patellofemoral pain syndrome, *Practical Pain Management*. Spontaneous intraperitoneal urinary bladder rupture due to alcohol-intoxication, *Urology*.

To, E. Presentations/abstracts: Why patients do not follow through with behavioral health referrals: a quality improvement project on patient-perceived barriers in a community health care setting.

Todd, B. Presentations/abstracts: Using horses in physical therapy for people with Parkinson's disease: effects on mobility and quality of life.

Toma, T. Presentations/abstracts: Evaluating health knowledge, literacy, and activity levels of elementary students through the Nutrition and Health Awareness program.

Tommarello, G. Presentations/abstracts: Where's MB2?

Tompkins, A. Presentations/abstracts: Accuracy, reliability, and clinical feasibility of AI-assisted remote orthodontic tooth monitoring technology.

Tonks, T. Presentations/abstracts: Identifying an association between sensory processing and food sensitivities.

Toohill, HR. Presentations/abstracts: Clinical evaluation findings in patients diagnosed with deltoid ligament ankle sprains: a report from the Athletic Training Practice-Based Research Network.

Tostado, S. Publications: How would you treat this malocclusion? *PCSO Bulletin*.

Towakoli, M. Presentations/abstracts: G protein-coupled receptors potentially mediate the exercise pressor reflex.

Tran, A. Presentations/abstracts: Addressing food insecurity by increasing awareness of local resources in Centreville, Illinois.

Tran, B. Presentations/abstracts: Determining average height and weight for the Mixteco-speaking pediatric population at the Community Healthcare Centers of the Central Coast.

Tran, C. Presentations/abstracts: The impact of methamphetamine abuse and mental health outreach in high school students of O'ahu, Hawai'i.

Tran, N. Presentations/abstracts: Implant angulation differences in the 1st and 2nd mandibular molar region.

Tranquillo, C. Presentations/abstracts: Preceptor education: where's the gap and how do we fill it?

Trembley, K. Presentations/abstracts: Community centered approach to educating mothers on health-related topics.

Troyer, E. Presentations/abstracts: Identification of an extracellular inhibitor of persistence in *S. aureus*.

Truong, K. Presentations/abstracts: Outcome measures: knowledge translation of APTA clinical practice guidelines to practicing physical therapists.

Tucker, C. Presentations/abstracts: Inulin protects intestine from LPS induced gut barrier damage. Effects of inulin on intestinal barrier function in a Caco-2 cell monolayer model of intestinal barrier.

Tuell, M. Presentations/abstracts: Reference values in individuals without disabilities for activity limitation tests used in para-athletics classification.

Underwood, K. Presentations/abstracts: Qualities of ATSU DPT graduates identified as contributing factors to leadership in the physical therapy profession.

Underwood, R. Presentations/abstracts: Development of a clinician education module on hippotherapy with Parkinson's disease.

Urbanik, F. Presentations/abstracts: A cognitive protocol for individuals with concussion.

Uribe, M. Presentations/abstracts: Outcome measures: knowledge translation of APTA clinical practice guidelines to practicing physical therapists.

Vaccaro, C. Presentations/abstracts: Prioritizing preventative health in older adults residing in long term care facilities through vaccination.

Vadali, V. Presentations/abstracts: Use of the Nutrition and Health Awareness (NHA) program in improving health knowledge and attitudes among New York City children.

Vaidya, P. Publications: Gout diagnosis and management: updated treatment guidelines, *Practical Pain Management*.

Valadez, R. Presentations/abstracts: COVID-19 vaccine hesitancy amongst adult patients at Adelante Healthcare in Maricopa County, AZ.

Valassis, M. Presentations/abstracts: Evaluating the accuracy and precision of intraoral scanners.

Valazquez, K. Presentations/abstracts: Return to duty following head injury of service members assigned to 1st Marine Raider Battalion.

Van Damme, C. Presentations/abstracts: Development of a clinician education module on hippotherapy with Parkinson's disease.

Vanden Bosch, K. Presentations/abstracts: Morphometric analysis of pyramidalis muscle in Midwestern Americans.

Vargo, RJ. Presentations/abstracts: Prevalence of carotid artery calcifications on military veterans' panoramic radiographs.

Varnell, K. Presentations/abstracts: Occupational therapy scope of practice: pediatric mental health across the continuum.

Vaughn-Pierce, B. Presentations/abstracts: Preparing for pandemics: lesson plan design for elementary-aged children.

Vazquez, R. Presentations/abstracts: Relationship between sensory impairment and gait performance following stroke.

Veazey, C. Presentations/abstracts: Pilot study for the use of the Spurgeon Method™ of breast massage after mastectomy.

Venman, A. Presentations/abstracts: Does caregiver training improve safety and functional outcomes for patients with dementia?

Verma, T. Presentations/abstracts: Twists, turns, and blockages to colorectal screening follow-up.

Vida Datario, A. Presentations/abstracts: Reducing diagnostic palpatory force variability after 8-weeks of training with objective feedback.

Vimawala, Z. Presentations/abstracts: Assessing barriers: why tobacco dependence treatment does not occur in the dental clinic.

Vo, A. Presentations/abstracts: Community centered approach to educating mothers on health-related topics.

Vo, VD. Publications: Planning pregnancy during the COVID-19

pandemic: are the risks worth taking? *Journal of the American Academy of Physician Assistants*.

Vogt, R. Presentations/abstracts: Difficult conversations in various physical therapy settings: pilot study.

Wainwright, B. Presentations/abstracts: The incidence of jaw pain referrals to OMS due to impacted asymptomatic third molars.

Waite, A. Presentations/abstracts: The impact of methamphetamine abuse and mental health outreach in high school students of O'ahu, Hawai'i.

Waite, AJ. Publications: A one year longitudinal comparative analysis of visual outcomes between femtosecond laser-assisted cataract surgery and standard phacoemulsification cataract surgery, *Clinical Ophthalmology*. Controversy and consideration of refractive surgery in patients with heritable disorders of connective tissue, *Journal of Clinical Medicine*.

Waite, M. Presentations/abstracts: Protective effects of melatonin on elevated homocysteine in human RPE cells.

Walter, C. Presentations/abstracts: Pedal anchoring in the American alligator (*Alligator mississippiensis*). The biomechanics of pedal anchoring in *Alligator mississippiensis*.

Walter, C. Presentations/abstracts: The impact of methamphetamine abuse and mental health outreach in high school students of O'ahu, Hawai'i.

Wang, A. Presentations/abstracts: Approaches to nutritional health awareness and first aid in students with special needs.

Wang, A. Presentations/abstracts: Mini docs: a novel online course delivery to empower student advocates for SARS-CoV-2 safety on Oahu.

Wang, J. Presentations/abstracts: A rare complication of HELLP in a pregnant homeless woman: a case report. Health education video development: improving health literacy in Afghan refugees to better navigate the US pharmacy system.

Wang, K. Publications: Political campaign contributions of surgeons in the United States throughout the 2020 election cycle, *Journal of the American Medical Association Surgery*. Robotics in neurosurgery: current prevalence and future directions, *Surgical Neurology International*. Presentations/abstracts: COVID-19 vaccine hesitancy amongst adult patients at Adelante Healthcare in Maricopa County, AZ.

Watson, M. Presentations/abstracts: Inhibition of *Escherichia coli* ATP synthase by shikonin and alkannin.

Webster, J. Presentations/abstracts: Oral health related quality of life: the impact of removable dental prosthesis on elderly patients.

Webster, M. Presentations/abstracts: Mindfulness-based interventions in addressing negative health outcomes related to adverse childhood experiences.

Wehner, A. Presentations/abstracts: A systematic literature review of the relationship between resilience and burnout among healthcare executives.

Wehner, P. Presentations/abstracts: Assessment of cannabis use among dental urgent care patients.

Weigel, J. Presentations/abstracts: The use of dual inclinometry to measure cervical rotation: an assessment of validity and reliability.

Wennerholm, C. Presentations/abstracts: Emergency preparedness in the dental office survey: report on the use of the Ten Minutes Saves a Life! app.

White, C. Presentations/abstracts: CTS using ultrasound diagnostic measures. Scoping review of female sex workers risk factors and interventions.

White, D. Publications: Effects of a low carbohydrate/healthy fat/ketogenic diet on biomarkers of health and symptoms, anxiety and depression in Parkinson's disease: a pilot study, *Neurodegenerative Disease Management*. Women caring for husbands living with Parkinson's disease: a phenomenological study protocol, *Journal of Personalized Medicine*.

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STUDENT SCHOLARLY ACTIVITY (September 2020-December 2022)

Whiteman, T. Presentations/abstracts: Incorporating entrustable professional activities in AT education.

Wilcox, B. Presentations/abstracts: Healthcare experiences of persons with chronic pelvic pain described on Reddit: a qualitative study.

Wilhite, R. Presentations/abstracts: The customization and trends associated with biological width observed utilizing combination scan technique.

Wilkerson, A. Presentations/abstracts: Excessive daytime sleepiness for OCOA patients at the ATSU/Affinia dental clinic in St. Louis.

Wilkerson, S. Presentations/abstracts: Focus group model for collaborative health education with refugees in King County, WA.

Wille, AE. Publications: Prevention of external auditory canal exostosis in the Colorado whitewater community, *Journal of Osteopathic Medicine*. Presentations/abstracts: Hepatitis C treatment and management efficacy in a primary care setting.

Williams, A. Presentations/abstracts: Do-it-yourself orthodontics consumer survey.

Williams, M. Presentations/abstracts: Analysis of authorship in the *Journal of Aquatic Physical Therapy*.

Williams, M. Presentations/abstracts: The customization and trends associated with biological width observed utilizing combination scan technique.

Williams, G. Presentations/abstracts: ATSU Dreamline Pathways®: moving the dial—student mentoring 360 degrees. Fracture strength of CAD/CAM lithium disilicate crowns fabricated with different thicknesses. Fracture strength of chair-side CAD/CAM lithium disilicate crowns fabricated with different thicknesses. Fracture strength of chairside CAD/CAM lithium disilicate crowns fabricated with different thicknesses. Fracture strength of chairside CAD/CAM lithium disilicate crowns of different thicknesses.

Willis, A. Presentations/abstracts: Why patients do not follow through with behavioral health referrals: a quality improvement project on patient-perceived barriers in a community health care setting.

Willis, T. Publications: Harry Potter and the osteopathic medical school part 2: creating a virtual Harry Potter-themed day as a high-yield review for final examinations, *Medical Science Educator*. Presentations/abstracts: Mindfulness-based interventions in addressing negative health outcomes related to adverse childhood experiences.

Wilson, A. Presentations/abstracts: Examining the relationship between patellar tendinopathy and anterior cruciate ligament reconstruction.

Wlodarkiewicz, C. Publications: Educational value of ultrasonography used as a diagnostic tool by medical students at a student-run free clinic, *Missouri Medicine*.

Wojcik, A. Presentations/abstracts: An exploratory study of rehabilitation services available for soft tissue sarcoma patients in the outpatient setting. Evidence-based interventions for cognitive rehabilitation post-stroke: a mapping review.

Wolf, C. Presentations/abstracts: The use of virtual reality in pain management for pediatric patients in the acute hospital setting.

Wong, A. Presentations/abstracts: Correlation between BMI and caries risk.

Wong, A. Presentations/abstracts: Evaluation of polishing systems for CAD/CAM polymer infiltrated ceramic network restoration.

Wood, J. Presentations/abstracts: Emergency preparedness in the dental office survey: report on the use of the Ten Minutes Saves a Life! app.

Woodard, T. Publications: SARS-CoV-2 testing and clinical outcomes in a Texas tertiary care center labor and delivery unit, *Baylor University Medical Center Proceedings*.

Woods, L. Publications: Myeloid sarcoma as a manifestation of acute myeloid leukemia, *Baylor University Medical Center Proceedings*.

Worsham, J. Presentations/abstracts: Relationship of self-reported driving habits with attention and cognition in people with Parkinson's disease.

Wouters, C. Presentations/abstracts: Hemarthrosis caused by infrapatellar plica injury.

Woytek, H. Presentations/abstracts: Clinical variability of six-minute walk test protocols by licensed physical therapists: a survey.

Wright, D. Presentations/abstracts: Improving the quality of diabetes management in a resident clinic setting. Optimizing diabetes management in an outpatient setting.

Yanez, S. Presentations/abstracts: Twists, turns, and blockages to colorectal screening follow-up.

Ybarra, Y. Presentations/abstracts: Developing an occupational therapy program for Hispanic adults diagnosed with cancer. How simulated auditory hallucinations impact occupational performance and learning among OT students.

Yee, S. Presentations/abstracts: Virtual health and wellness program for elementary students.

Yergensen, A. Presentations/abstracts: Outcome measures: knowledge translation of APTA clinical practice guidelines to practicing physical therapists.

Yokley, T. Presentations/abstracts: The effect of cannabis use on local anesthesia and parenteral sedation.

Young, G. Publications: A tooth decaying in the appendix: an unusual cause of appendicitis, *Cureus*. Primary appendiceal adenocarcinoma masquerading as acute appendicitis: a case report, *Cureus*.

Yu, M. Presentations/abstracts: The impact of COVID-19 on food insecurity and oral health in America.

Yuan, K. Presentations/abstracts: Reducing the time to find medical supplies among medical students.

Yusuf, A. Publications: Regulation of bFGF-induced effects on rat aortic smooth muscle cells by β 3-adrenergic receptors, *Current Research in Pharmacology and Drug Discovery*.

Zahriya, Y. Publications: Regulation of bFGF-induced effects on rat aortic smooth muscle cells by β 3-adrenergic receptors, *Current Research in Pharmacology and Drug Discovery*. Presentations/abstracts: Interactions between β 3-adrenergic receptors and bFGF-induced effects in rat aortic smooth muscle cells.

Zamora, J. Presentations/abstracts: The use of virtual reality in pain management for pediatric patients in the acute hospital setting.

Zehra, S. Publications: The role of process-directing agents on enamel lesion remineralization: fluoride boosters, *Biomimetics*. Presentations/abstracts: Evaluating the accuracy and precision of intraoral scanners.

Zeien, S. Publications: C-reactive protein levels associated with COVID-19 outcomes in the United States, *Journal of Osteopathic Medicine*.

Zimmer, K. Presentations/abstracts: Video-based educational module to support adaptive gaming services.

Zinn, S. Presentations/abstracts: Prediction of balance and gait recovery six months and beyond stroke.

Zlobinskaya, M. Presentations/abstracts: Interproximal contact loss between implant and adjacent tooth.

Zubke, CA. Presentations/abstracts: Implementing diaphragmatic breathing techniques into a collegiate women's basketball program.

Please note: Peer-reviewed journal publications, presentations, and abstracts are included as reported in the Fall 2020 through Supplement 2022 *ATSU Research* newsletters, prepared by Research Support. Individuals listed were ATSU students, fellows, and residents at the time publications, presentations, or abstracts were self-reported to Research Support.



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Def·i·ni·tions of scholarly activity

ATSU follows Ernest L. Boyer's model of scholarship. This model calls for expansion of the traditional definition of scholarship and research. It is broken up into five categories: discovery, application, integration, teaching, and engagement.

scholarly activity

schol·ar·ly ac·tiv·i·ty 'skā-lər-lē ak-'ti-və-tē

noun

the process in which research is conducted, including discovery, application, integration, teaching, and engagement.

discovery

dis·cov·ery di-'skə-v(ə-)rē

noun

1. to uncover new information not previously known, or to expand upon a pre-existing idea, bringing new knowledge to the subject.

A laboratory team made the *discovery* that a specific species of *Staphylococcus* produces persister cells.

application

ap·pli·ca·tion ,a-plə-'kā-shən

noun

2. to use knowledge, either newfound or previously known, in a practical or professional manner. To apply is to use what you've learned in a productive way.

Application may be found within using practice-based research networks (PBRNs), which give researchers access to a plethora of medical records, to find the most effective forms of care in different healthcare practices.

integration

in·te·gra·tion ,in-tə-'grā-shən

noun

3. to use discovered information across disciplines or time, to merge information to further teach the community affected by the new information.

An example of *integration* is interprofessional education, such as students from different disciplines working together in the Drabing Human Patient Simulation Center.

teaching

teach·ing 'tē-chiŋ

noun

4. using peer-reviewed discoveries to educate others in the field. It requires making the materials public and accessible to other scholars.

An example is developing a lesson plan, so other teachers/professors/scholars can access it and apply it when they are *teaching* students or others in their field.

engagement

en·gage·ment in-'gāj-mənt

noun

5. to interact with discoveries in such a way that benefits everyone involved.

Engagement may be found in the use of a health-related outreach program. In using this program, students are able to work with community members to solve an important healthcare issue while simultaneously learning integral skills for their future careers.



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