

## A. COVER PAGE

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NIOSH Training Project Grant Closeout Report  
PI: Mark E. Benden, Ph.D, Principal Investigator  
Award: 2TO3OH009410-09-00  
Term: 5 Year Close Out Report (7/1/2018-6/30/2023)

**TPG Summary:** The Occupational Safety and Health Training Program at Texas A&M University’s School of Public Health delivers high quality training in occupational safety and health focusing on NIOSH’s *Total Worker Health*® Program with available concentrations in safety, health, and ergonomics for master’s and doctoral level students. Students completing the program possess knowledge and skills in the general concepts of problems and solutions with cost/benefit analysis related to occupational safety and health/wellness, ergonomics, industrial hygiene, occupational disease, human anatomy, user-computer interaction, display and controls, information processing, industrial process safety, epidemiology, and statistics.

**Key Senior Personnel:** list key personnel, roles, contact info, and phone number.

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**TPG Website:** <https://public-health.tamu.edu/departments/eoh/index.html>

In the Fall of 2022, Dr. David Douphrate joined the program faculty. Dr. Douphrate brings a wealth of agricultural worker occupational safety and health research opportunities. As our program has grown in faculty, we have planned for staff to manage our trainees. Our program is generous to students as we provide full tuition (up to 9 semester hours) for a full academic year as well as a monthly stipend for each student. To maximize student benefit, we have decreased our faculty effort and increased our staff effort. Each trainee chooses a faculty member whose research interests them. Our current faculty research interests are agricultural worker health and safety, occupational safety & industrial hygiene, human factors, digital humans, and new technology. The feedback from trainees when exiting the program has been useful year-to-year as we further refine and improve our program. We are well positioned to encourage our trainees to add research to their activities, and we offer opportunities for our trainees to work on industry projects.

**High Impact Stories:** The success of the Occupational Safety and Health Training Program at Texas A&M University’s School of Public Health is best demonstrated by the success of our students. For the five (5) year reporting period (July 1, 2018 – June 30, 2023), the program made a significant impact in increasing the overall number of qualified OS&H personnel in the region. During this period, we graduated over 85 graduate students currently working in the OS&H fields. Another high-impact activity students participate in is the internship experience that provides invaluable training and leads to employment opportunities. NIOSH trainees completed research experiences in design, safety and human factors which included 3D drawings and printing of new tools they designed. Travel funds awarded to trainees were used for conference registration and travel to the Applied Ergonomics Conference where they gained valuable experience and knowledge regarding ergonomics at all levels across different organizations. NIOSH trainees were integral to student organizations, including the American Society of Safety Professionals (ASSP) and Human Factors and Ergonomics Society (HFES). The students successfully navigated the MPH program in occupational safety and health, graduated, and secured full-time jobs or continued their education (DrPH). Our program faculty worked with SPH’s Office of Research in adding a 6<sup>th</sup> student to the NIOSH training grant due to travel funds not spent during COVID-19 year(s).

Trainees presented on their internships in virtual and face-to-face departmental showcases for all Environmental and Occupational Health department faculty, staff, and (potential) students. NIOSH trainees also served as ambassadors for the department in recruiting. Our Industry Advisory Board (IAB) and TPG Advisory Committees meet annually on the

campus of Texas A&M. These meetings are attended by trainees to network with industry partners. Each trainee was involved to a high degree in welcoming industry members, presenting their research and experience, and participating on student panels during the IAB and TPG. Through the Texas A&M Ergo Center, trainees were introduced to consulting projects and research opportunities. Trainees completed task analysis and job description formulations, helping the Ergo Center perform ergonomic evaluations for industry partners, including General Motors. NIOSH trainees completed an interdisciplinary ergonomic evaluation and analysis project with Texas A&M School of Veterinary Medicine in equine dentistry. NIOSH trainees also presented information about ergonomics and occupational safety to middle and high school students through Aggie STEM summer camp sessions and handed out safety items at the REACH fair on campus, serving hourly service employees of Texas A&M. Trainees used ergonomic evaluation software from Humantech purchased by the Ergo Center to practice data collection and analysis in real-world situations. Trainees learned to characterize the population of remote office workers, previously not well catalogued. They helped determine gaps in remote worker training, ergonomics, and organizational support. Data from industry partners about remote workers was shared with NIOSH students to assist them with understanding this worker population. Trainees attended several NIOSH webinars in the Expanding Research Partnership tract with TAMU faculty and staff and were able to take advantage of extracurricular educational opportunities, such as Human Robot Interaction Seminar series. In addition, students served as evaluators when TAMU employees requested an ergonomic office evaluation or as part of the onboarding process. In addition, NIOSH students also performed ergonomic evaluations at a local hospital that partners with the Ergo Center. They gained valuable one-on-one experience, understood job tasks and personal risk factors, which allowed them to solve problems right away.

#### **NIOSH Trainees:**

**Kamrie Sarnosky** graduated with her DrPH in December 2019. Kamrie's dissertation work was evaluating employee behavior and potential long-term health risks of remote working. She also completed research on the impact of disasters on employees in computer-based occupations, and she presented at the Applied Ergonomics Conference in March 2019. Ms. Sarnosky was invited to give a formal presentation to the Institute of Sustainable Communities on her work regarding the benefits of a home office for business resiliency during disaster recovery in April 2019. In her time as a trainee, Ms. Sarnosky completed her internship requirement at *Johnson & Johnson Consumer Inc.* where she worked in regulatory affairs. Kamrie accepted a full-time position as a regulatory affairs specialist with *DePuys Synthes*.

**Shannon Bui** graduated with her MPH from Texas A&M University. Shannon's academic strengths were exemplified through her opportunities to represent Texas A&M as an EHS summer intern at Boeing in South Carolina. Ms. Bui was a graduate student mentor for a high school AP Capstone research project, investigating the physical and mental effects of prolonged bus rides on one's short and long-term health. In addition, she served on the social media committee for the 2019 Applied Ergonomics Conference to promote the conference to members within industries and universities. After graduation, Shannon accepted a position with Boeing.

**Shelby O'Neill** also graduated with an MPH in occupational safety and health. Shelby represented NIOSH and NORA as she presented at the National Occupational Research Agenda for Musculoskeletal Health poster at the Applied Ergonomics Conference in New Orleans, Louisiana in March 2019. Shelby is currently employed in EHS at SpaceX.

**Aaron Puente** is a graduate of the EOH MPH program. Mr. Puente has received his Community Health Education Specialist certification and participated in multiple organizations within and outside the School of Public Health. He was active in the American Society of Safety Professionals, served on the School of Public Health's Climate & Diversity Council, and was a member of the Applied Ergonomics Conference social media committee. In addition to his academic progress, he secured an internship with HollyFrontier Corporation. Mr. Puente currently works at SpaceX in the EHS organization.

**Haylee Whitehead** graduated with an MPH with an emphasis on Occupational Safety and Health. She was an active member in ASSP and was involved in multiple organizations across Texas A&M's campus including: Texas A&M 2030 Vision - Innovation and Discovery Subcommittee, Traditions Council, Titans of Investing and taught English classes for international students. She interned with BHP in the summer of 2018, assessing hand-arm vibration on offshore

platforms and developed a training module for workers. Upon graduation, May 2019, Haylee started a career with BHP in Houston, Texas working as a HSE Specialist in Drilling and Completions within the Gulf of Mexico. Haylee currently works at SpaceX.

**Alejandro Casas** is a Master of Public Health graduate with a concentration in Occupational Safety and Health. He interned summer 2019 with HollyFrontier, where he worked on developing a comprehensive hand protection initiative and helped perform routine safety audits. Upon graduation, Alejandro started with Chevron working as a HES Specialist in Midland, Texas.

**Kathryn Klumb** is a Master of Public Health graduate with an emphasis in occupational health and safety. Ms. Klumb worked on a big data research project identifying risk factors for office workers developing musculoskeletal disorders. During the summer of 2019, Ms. Klumb worked as a risk control intern with CNA Insurance in Chicago where she conducted risk assessments within a variety of industries, such as manufacturing, distribution, corporate office settings, and construction. She also created a risk control brochure for CNA about exoskeleton use in the workplace. In summer 2020, Ms. Klumb interned with Holly Energy Partners as a safety intern before returning in the fall to TAMU to complete her last semester of her MPH degree. Kathryn currently is employed by Liberty Mutual.

**Sterling LaBoo** graduated with an MPH in occupational safety and health in May 2021. Upon graduation, he began working as an EHS Specialist for International Safety Systems Inc. and is currently a contractor with Merck Pharmaceuticals in Industrial Hygiene.

**Kaysey Aguilar** earned her DrPH (May 2022) in environmental health and her research centered on the effectiveness of different digital training modalities for remote office workers. She was a founding member of Interprofessional Relationship Outreach Network – a new student organization that aims to foster networking and interprofessional development among the Texas A&M Health Science Center schools. She spent the summer of 2020 as a Global Regulatory Affairs intern with Janssen Pharmaceuticals. Kaysey applied for and was awarded a research fellowship grant from UT Health to continue her research. In the summer of 2021, she acquired an internship position at Texas A&M EHS, and she revamped their laboratory equipment inspection standard operating procedures.

**Sarah Provazek** graduated with an MPH studying Occupational Health and Safety. In summer 2019, she served as the Corporate Safety Intern at Holly Frontier Corporation in Dallas, Texas. Through this internship, she was able to travel to the company's petroleum refineries and helped to compile a new hand protection program to be implemented across these refineries. Upon graduation, Sarah accepted a job with CyrusOne as a health and safety associate.

**Austin Akin** graduated in May 2022 with an MPH in Occupational Safety & Health from Texas A&M University, where he also obtained his undergraduate degree. After graduation, Austin became a Safety Engineer as part of Mortenson Construction's Solar and Emerging Renewables Group.

**McKenna Schutty** is a graduate of the program with an MPH student in Occupational Health and Safety. In the summer of 2021, McKenna was a safety intern for TD Industries in Dallas where she spent most of her time on construction sites around the city. In the summer of 2022, she was the EHS intern for Cargill in Ohio where she learned more about sustainability within EHS. McKenna is employed by Cargill.

**Jacob Birenbaum** graduated in August 2022 with an MPH in Occupational Safety and Health and with a Certificate in Business. In the summer of 2021, Jacob completed his practicum at Holly Energy Partners in Dallas, Texas. His role consisted of industrial hygiene monitoring and sampling. In addition, he was involved in a project related to Health and Safety at Hazardous Waste Sites during which he earned his HAZWOPER certification, and he donned and doffed the proper equipment and understood how the procedures applied in an actual work setting. Jacob currently works at Topsoe.

**Kathryn Wallace** graduated in May 2022 with an MPH in Occupational Safety and Health, and she began working as an HSE Specialist at Chevron. In the summer of 2021, she was an environmental health and safety intern at Lhoist North America in Fort Worth, Texas. During the internship, the most valuable thing she learned was the importance of

effective communication and continually learning. During her final year in the MPH program, she worked on an ergonomics project with Dr. Mark Benden and fellow student Hannah Smith.

**Jessica Barajas** also graduated in May 2022 with an MPH in Occupational Health and Safety. In the summer of 2021, she worked as an Environmental Health & Safety Intern at Qorvo Semiconductor in Richardson, Texas. She had a variety of assignments which included risk assessments, industrial hygiene sampling, hazard communication labeling, and managing the safety ticket system. The Occupational Health & Safety program allowed her to secure a full-time position as a Safety Engineer upon graduation prepared her to face difficult challenges with confidence.

**Lauren Williams** is a DrPH student in Public Health Sciences with a concentration in Environmental Health. After graduation, she wants to enter the Environmental Health and Safety (EHS) field as an EHS Specialist and work her way towards an Industrial Hygienist position. Although she did not complete an internship/practicum in the summer of 2021, she worked as a COVID-19 Compliance Officer (C19CO) on location of a short film. Lauren helped develop a project presentation tailored to skin cancer with the goal of strengthening comprehension of environmental and occupational diseases.

**Elizabeth Boerlin** was a DrPH student with an emphasis in Occupational Safety and Health. She is a current Certified Safety Professional and an active member in the ASSP Central Texas Chapter. Elizabeth is currently the Preparedness Program Director for Texas A&M Engineering Extension Service (TEEX). She continues to apply the concepts and knowledge obtained in her academic training to improve processes and programs to serve first responder and emergency management professionals. Elizabeth's summer 2021 internship was as the Safety Officer for the Brazos Valley Vaccine Hub Incident Management Team, which has delivered over 31,000 vaccines to the Brazos County area.

**Brandon Coon** worked with HollyFrontier in El Dorado Kansas as a Safety intern during the summer of 2020. He created a comprehensive PPE matrix that identified the proper PPE selection for all activities in the refinery, began the implementation of new hearing protection, conducted over 300 air samples for various hazards, and updated various safe operating procedures. Brandon interned the summer of 2021 with Textron Marine and Land Systems in New Orleans, LA. Brandon currently works at OXY.

**Brett Harp** interned with Mortenson Construction in Fort Stockton, Texas and worked at a solar field with the Safety Engineering team. He accepted a full-time job offer with them in their Sports & Entertainment Industry as a Safety Engineer. In the fall of 2020, he assisted with research study with Drs. Benden and Rhee. This study included 20 participants and analyzed the effects of alcohol consumption on job performance using bio-tech sensors.

**Grant Bergeron** chose to continue his education in occupational safety and health after a short stint working in ergonomics. While he enjoyed the field, he felt it was necessary to enroll in graduate school to develop further skills and broaden his scope of health, safety, and environment. Texas A&M was the perfect choice given the department and faculty industry background, strong Aggie network, and ongoing research within the EOH research centers. He is working with the department and staff this year and learning under Dr. Douphrate. For the summer of 2024, Grant hopes to begin working in the industry, ideally oil and gas/energy, after his recent internship with Chevron. He plans to graduate in May of 2024.

**Hannah Payne**, with an anticipated graduation in spring 2024, is excited to step into the field of occupational safety and health with a clear vision. Her goal is to shape positive change, working collaboratively to cultivate safer work environments for individuals across various sectors.

**Felix Fru** was a DrPH student in the School of Public Health at Texas A&M University. Dr. S Camille Peres was his faculty mentor. She dedicates time to ensure he becomes a successful Aggie by guiding him in his Human Factors research. He has a graduation target of 2026. Thereafter, he hopes to apply his acquired knowledge in practical industrial settings.

**Anna Longbottom** graduated with her MPH in May 2023. While her undergraduate education greatly influenced the passion within her for the safety and health of others, it was her internship experience in the summer prior to beginning the graduate program that truly solidified her decision to continue pursuing her education in Occupational Safety and

Health. It was during those few months that she grew in both technical skills and knowledge and learned the impact of safety as she participated in the accident investigation of a fatality. Anna is currently employed by BP.

**Kaelyn Renfro** also graduated in May 2023 with an MPH in Occupational Safety and Health. As a NIOSH Trainee, she worked alongside Dr. Pickens for research opportunities and learned from his lived experiences. Kaelyn started her career as a Safety Representative in the Oil & Gas industry further protecting the lives of the men and women that ignited my passion for safety in the first place. Kaelyn is currently employed by Conoco Phillips.