



The University of Texas
Health Science Center at Houston

School of Public Health

Southwest Center for Occupational
and Environmental Health

**The University of Texas Health Science Center Houston
The Southwest Center for Occupational and Environmental
Health (SWCOEH)**

Annual Program Report

Reporting Period: July 1, 2016 – June 30, 2017

Principal Investigator: Elaine Symanski, PhD

Section I – The SWCOEH Education and Research Center

Summary

The overall goal of the SWCOEH Education and Research Center (ERC) at The University of Texas Health Science Center School of Public Health (UTHealth SPH) is to respond to the critical need for well-trained occupational and environmental health specialists by providing graduate level academic and research training and continuing education. The UTSPH has a unique, multi-campus system, with the main campus located in the Texas Medical Center in Houston and five regional campuses in Austin, Brownsville, Dallas, El Paso and San Antonio. The ERC programs, faculty and students are located in Houston and San Antonio primarily in the Department of Epidemiology, Human Genetics and Environmental Sciences with supporting faculty from other disciplines inside and outside of the UTHealth SPH. All campuses are linked electronically, facilitating quality teaching and research, expanded course offerings, interdisciplinary collaboration and access to regional stakeholders as well as expanding our reach to minority student populations. The ERC has been continuously funded since it was established in 1977 and we are celebrating our 40th anniversary this year. The ERC provides master level training in Industrial Hygiene (IH), doctoral level training in IH and Occupational Epidemiology, and postdoctoral residencies in Occupational Medicine. In addition to the academic degree programs, the ERC has active Continuing Education and Outreach Programs (CE) and a Pilot Projects Research Training Program (PPRTP) that provide a full spectrum of training opportunities. We also develop interdisciplinary training opportunities to enhance field and other experiences. SWCOEH faculty and trainees are involved in research spanning areas that include military health, ergonomics, workplace violence, air pollution epidemiology, fire fighter health, farmworker health and reproductive health. An external advisory board comprised of members from industry, labor, government, NGOs, and academia provide guidance to the SWCOEH on current and future directions.

Center-wide, our specific objectives are to (1) facilitate occupational safety and health research and training; (2) continuously improve by conducting assessments in accordance with program-specific evaluation plans, and revising these plans, as necessary; (3) successfully manage academic and non-academic programs; (4) enhance the funding base of the SWCOEH; and (5) effectively communicate with stakeholders.

Relevance

The UTHealth SPH ERC provides advanced degree training in occupational health and safety to meet the critical need for trained professionals in Public Health Region (PHR) 6. A full spectrum of degree programs, advanced research training, and continuing education courses help meet the needs in the Region for well-trained professionals to protect the health and safety of the nation’s workforce.

Current Key Personnel

Elaine Symanski, PhD, Principal Investigator, SWCOEH Director and Interim CE Director

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ERC Web Link

Additional information about the SWCOEH is available at www.swcoeh.org.

Section II – High Impact Program Highlights

The SWCOEH hosted a seminal meeting with the external Advisory Board in August of 2016, to discuss whitepapers. We received feedback on research and teaching programs focused on Total Worker Health. In September, 2016, the SWCOEH welcomed Sarah Felknor, Dr.P.H. to present the plans for the next decade of the National Occupational Research Agenda (NORA). In addition to presenting an overview and evolution of NORA, Dr. Felknor discussed the ways in which the guiding principles of burden, need, and impact (BNI) are being used to identify and integrate research and funding priorities at NIOSH. She also discussed how BNI will be implemented in the third decade of NORA. In October, the SWCOEH hosted a screening of “A Day’s Work”, a documentary film that introduces the perspective that the temporary staffing industry makes workplaces more dangerous, is used to hide the safety records of some of the biggest employers in the country, and makes the American Dream harder to reach for millions of working people. With thousands killed in preventable workplaces accidents every year in the US, the film provides a reminder of the cost of just one individual by vividly looking into the life and

perspective of Day's 17-year-old sister Antonia. For SWCOEH's annual field trip on April 12, 2017, SWCOEH faculty, staff, students, including NIOSH trainees went to see Petra Nova, the world's largest carbon capture system, at the NRG W.A. Parish power plant southwest of Houston. Petra Nova is the only system of its kind in the U.S., and the largest in the world.

At the conclusion of the 2016-17 award cycle, the 18th Annual PPRTTP Symposium was held on June 2, 2017 on the UTHealth SPH campus in Houston, TX. Dr. Hester Lipscomb, Professor Emeritus at Duke University, provided a keynote presentation entitled "Evaluation Methods in Occupational Safety." This was followed by presentations by seven 2016-17 PPRTTP awardees (representing AR, LA, and TX research institutions). Fifty-five attended the symposium which was comprised of both students and faculty. For the 2017-18 cycle, we received seven proposals from investigators from institutions in Texas, New Mexico, Louisiana, and Oklahoma. We announced the awarding of four proposals (\$49,888 total), representing investigators at research institutions in Texas. During the 2016-17 reporting period, PPRTTP past awardees published research findings in eight peer-reviewed journals. In addition to presenting at the Annual PPRTTP Symposium, awardees also presented at six conferences. For example, Dr. Kaitlin Gallagher (2016-17 awardee) presented research findings at the South Central American Society of Biomechanics Regional meeting in Plano, TX in March of 2017. Dr. Aditya Jayadas (2015-16 awardee) presented research findings at the 8th International Conference on Applied Human Factors and Ergonomics Meeting (July 2017) in Los Angeles, and at the Southwest Human Factors Symposium (June 2017) in San Antonio. Dr. Jayadas also used research findings to prepare and submit a NIOSH R21 research proposal which was not funded but a revision was resubmitted.

Industrial Hygiene

Directed by Dr. Lawrence Whitehead

During this year, we funded six trainees (five MPH, and one DrPH). Two NIOSH trainee MPH students graduated, as well as two DrPH and one MPH not on traineeships. The MPH trainee graduates are now employed at One Gas (a gas utility), and SevenGen consultants. NIOSH trainee students had internships in summer 2017 at Range Generation Next (safety contractor at Vandenberg AFB), Boeing in Portland OR, the Jr Costep program of PHS at the NIOSH station in Anchorage, and Trane, Inc. Non-funded students had internships at the National Renewable Energy Laboratory (NREL) in CO, Tesla in CA, and the radiation safety program here at UT. Several students attended the AIHCE conference in Seattle in May 2017.

Dr. David Douphrate achieved promotion to Associate Professor with tenure this year. Dr. Lawrence Whitehead represents AIHA on the ABET Board of Delegates, and is a consultant to a NIOSH job-exposure matrix (JEM) development project. Dr. Wei-Chung Su chaired the AIHA Aerosol Technology Committee during the reporting period. Dr. Robert Emery serves on the Texas Radiation Advisory Board (Texas Department of Health and Human Services), and is a subject matter expert for the Naval Post Graduate School Center for Homeland Defense and Security.

Occupational and Environmental Medicine

Directed by Dr. Arch "Chip" Carson

During the past year, the Occupational and Environmental Medicine (OEM) Residency graduated one OEM physician, Dr. Annamaria Macaluso, who was matriculated in the Complementary Pathway, and is employed by the Memorial Hermann Health System, charged with the setup of a new occupational medicine clinic in Houston. Dr. Macaluso will be sitting for the ABPM Occupational Medicine Board Exam in fall 2017. There are currently five physicians in the program: four in the OM residency track (Drs. Daniel Stroud, Krishna Surasi, Robert Blanco and Ifeoma Ama) and one in the Complementary Pathway (Dr. Vanita Agrawal). Drs. Stroud, Surasi and Blanco have completed the MPH degree, and Dr. Agrawal will graduate from the MPH in December 2017. Dr. Ama has a prior MPH from our School, and recently completed a full ACGME-accredited residency in Family Medicine at the UTHealth McGovern Medical School in Houston, where she was chief resident in her final year.

Occupational Epidemiology

Directed by Dr. David Gimeno

During the reporting period we funded six trainees. Five of them, two being from underrepresented minority background, continue their progress towards graduation. One of our trainees graduated and is working as epidemiologist for the U.S. Army Institute of Surgical Research in San Antonio. During this year, our trainees presented their research at several scientific meetings and produced peer-reviewed publications. Amanda Staudt, a recent graduate, presented at the August 2016 Joint Statistical Meetings in Chicago. Several trainees presented their research at the UTHealth School of Public Health Research Day in April 2017, where trainee Amanda Marshall received an Honorable Mention.

Two program faculty, Drs. Pompeii and Delclos, continue to develop audiovisual publications on training for healthcare workers, which meets annual training requirements mandated by OSHA's Respiratory Protection Standard. These efforts supplement previous trainings that they created, in collaboration with AAOHN, AOHP, ANA, and NIOSH: (1) OSHA's Respiratory Protection Standard: The Role of the Occupational Health Nurse Respiratory Protection Webkit (<http://aaohn.org/page/online-learning>); and (2) Respiratory Protection for Frontline Healthcare Workers. AAOHN Academy/NIOSH's National Personal Protective Technology Laboratory (<http://aaohn.org/page/online-learning>).

Further, the OE Program Director, Dr. David Gimeno, together with Dr. Delclos, OE faculty, were funded by the U.S. Department of Labor/Bureau of International Labor Affairs Office of Economic and Labor Research to conduct a nationally representative household survey on working conditions and health and related focus groups in each of the six Spanish-speaking countries in Central America (i.e., Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, Panama) among 9000 workers and several related focus group sessions centered on labor rights and work-related violence, in order to gather complementary qualitative contextual data on related priority topics.

Continuing Education Program

CE Director: Dr. Elaine Symanski

The Continuing Education program trained 948 people in 39 educational events, representing a total of 4,022 person-hours. We delivered 14 occupational medicine events, 6 safety courses, 6 industrial hygiene events; and 13 events did not fall into these categories, as they were multidisciplinary public health seminars. Notable continuing education events that took place this year were the History and Culture of Disease and Healing Seminar Series and the Texas College of Occupational and Environmental Medicine (TxCOEM) Annual Symposium.

The History and Culture of Disease and Healing is a collaborative seminar series that identifies the overlap between disciplines in health and humanities, and applies lessons in humanities to current public health practice in a global and cross cultural context. Overall, 171 professionals and students of external institutions attended 12 seminars over the course of the fall semester. This series is held in collaboration with Rice University, University of Houston and The Health Museum. Seminar topics are chosen for relevance to the contributions of the humanities to contemporary understanding or approaches to disease and healing, as we conceptualize from cultural/artistic/literary depictions and historical lessons of the relationship between human behaviors and disease and healing. Professionals in attendance include medical humanities scholars, physicians, nurses, social workers, public health and health science students and other professionals in public health related disciplines, as well those interested from the general public.

The TxCOEM Annual Symposium, held in Houston this year, is a unique and free educational experience in occupational and environmental medicine sponsored by the SWCOEH, the local Texas Chapter of the American College of Occupational and Environmental Medicine and the Texas Medical Association. This event attracted 79 attendees and provided education to enhance the physician's ability to prevent, diagnose and manage occupational and environmental illnesses and injuries by utilizing current techniques. Topics included Population Health Management as applied to the Industrial Environment, Economic reasons and Medical guidelines involved in Fitness for Duty, Animal Assisted Crisis Response and three Occupational Medicine Residency Research Presentations.