



Sunshine Education and Research Center
at the University of South Florida
CDC/NIOSH T42-008438
<http://health.usf.edu/publichealth/erc/>

Annual Report
July 1, 2016 - June 30, 2017

Summary

The Sunshine ERC at the University of South Florida is a regional resource for industry, labor, government and the public in the areas of occupational health and safety. The ERC continues to follow its goal of promoting workplace safety, health and well-being through education, research, continuing education and outreach. Its academic programs include (1) industrial hygiene, (2) occupational health nursing, (3) occupational medicine residency, (4) occupational safety, and (5) occupational health psychology. For students, there is strong interdisciplinary coordination and a research experience. The Sunshine ERC has many partnerships including the OSHA 21d consultation and training institute programs at USF, other ERCs, and NIOSH.

Our highlights below illustrate our commitment to the trainee research experience, interdisciplinary activities and the collaboration with other institutions to promote workplace health and safety.

Next year, USF will continue to cultivate partnerships and collaborative relationships with regional OH&S programs; and continue to champion continuing education, outreach, training and research strategies that improve the practitioner's environment and meet their OS&H needs.

Relevance

To meet the needs of Florida and the southeast, the Sunshine ERC at the University of South Florida continues to train OS&H professionals in industrial hygiene, occupational health nursing, occupational health psychology, occupational medicine residency, and occupational safety to provide an array of services based on best practices using current evidence and research ultimately promoting workplace safety, health and well-being. The SERC also provides continuing education outreach and hazardous substance training to workers and OS&H professionals in the community.

Sunshine ERC at USF

Contacts

SERC website: <http://health.usf.edu/publichealth/erc/index.htm>

<p>Center Administration Thomas E. Bernard, Director 813-974-6629 tbernard@health.usf.edu</p> <p>Candace Burns, Deputy Director 813-974-9160 cburns@health.usf.edu</p>	<p>Address USF College of Public Health 13201 Bruce B. Downs Blvd. Tampa FL 33612-3805</p> <p>Center Administrator Nolan Kimball 813-974-1120 nkimball@health.usf.edu</p>
<p>Industrial Hygiene Yehia Y. Hammad, Director 813-974-6625 yhammad@health.usf.edu</p> <p>Steve Mlynarek, Deputy Director 813-974-6628 smlynare@health.usf.edu</p>	<p>Occupational Health Nursing Candace Burns, Director 813-974-9160 cburns@health.usf.edu</p> <p>Helen Acree Conlon Deputy Director hacree@health.usf.edu</p>
<p>Occupational Health Psychology Paul E. Spector, Director 813-974-0357 pspector@usf.edu</p> <p>Tammy Allen, Deputy Director 813-974-0484 tallen@mail.usf.edu</p>	<p>Occupational Medicine Thomas Truncal, Director 813-974-7537 (OMR Office) ttruncal@health.usf.edu</p>
<p>Occupational Safety Thomas E. Bernard, Director 813-974-6629 tbernard@health.usf.edu</p> <p>P. G. (Pete) Rentos, Deputy Director 813-974-6661 prentos@health.usf.edu</p>	<p>Continuing Education Cathy Silva, Director 813-974-0989 hosman@health.usf.edu</p> <p>Robert Nesbit, Deputy Director 813-974-6879 rnesbit@health.usf.edu</p>

Highlights

Research Experience and Interdisciplinary Activities: Over the past few years, the Sunshine ERC has made a concerted effort to blend trainee research experiences with interdisciplinary activities. The principal research experiences are PhD dissertations, MSPH theses and MPH (or MSN only) special projects. The trainees will form hypotheses, gather data or use existing databases to test the hypotheses, and then prepare a report appropriate to the experience. Some trainees will also prepare a literature review paper as part of their classroom assignments or training program. From these activities, our trainees are encouraged to publish papers as well as make presentations at national and statewide professional meetings. Interdisciplinary research experiences are encouraged.

Beyond the usual professional conferences, our trainees and faculty are encouraged to present their research in interdisciplinary forums. USF Health Research Day has the broadest participation. The 2017 activities included a reception on Thursday night with our guests from the University of Puerto Rico, Florida International University, Florida Institute of Technology, University of Central Florida, Colorado State University, University of Georgia, Clemson University, and Baruch College - City University of New York. There were 39 poster presentations on Friday morning, followed by lunch with a research presentation by Lida Orta, PhD, Professor, University of Puerto Rico- Medical Sciences Campus, "Participation of Nursing Personnel in the Reduction of Work Related Physical and Psychological Risk Factors, Attitudes and Perceptions of Effects". The afternoon was a safety-oriented tour of Busch Gardens. The close-out activity was a networking picnic on Saturday morning.

Our trainees and staff also attend regional and national meetings sponsored by NIOSH-supported organizations. One of the first of these activities was attending the annual Rocky Mountain ERC Young Investigators NORA meeting. Recently trainees from all five academic disciplines joined Thomas Bernard and Nolan Kimball on a 3-day visit to Puerto Rico. The trainees from USF and UPR spent one day visiting a warehouse operation and a marijuana grow facility, with lots to learn. The second day was a jointly held professional development session that included local professionals. The USF group then visited a coffee plantation and a sugar museum in the south. While the official line is that the trip was a hardship, there are overwhelming requests to do this again. Another group of trainees attended the Emerging Issues and the Deep South Center for OH&S Annual Research Symposium hosted at Auburn.

Regional Activities: Along with sister ERCs in Alabama (Deep South Center) and North Carolina (North Carolina ERC) and with NIOSH, the Sunshine ERC organized a symposium at the Workers Compensation Institute and Florida Safety Conference in Orlando.

The Southeastern Occupational Network (SouthON) was formed to focus on occupational health and safety in the southeastern US. The annual SouthON is supported by a NIOSH conference grant and further supported by the regional ERCs. This year, the meeting developed a couple of themes during workshops, and one of those on occupational exposures to opioids led to PPRT awards through the University of Kentucky. This was a great model and the Sunshine ERC plans to support a research topic from the next meeting in the 2018-2019 budget year.

Sunshine ERC at USF

Building on the success of SouthON and the Deep South Emerging Issues meetings, the four ERCs in the Southeast plan to support a joint SouthON and Emerging Issues meeting.

Outreach: The SERC lead by Dr. Candace Burns and the SERC Student Advisory Committee initiated a partnership with Johnson Controls (lead battery plant) and local professional organizations (e.g., American Heart Association, American Lung Association, American Diabetic Association) to provide Total Worker Health (TWH) health promotion education and screenings for employees during a one day health fair. Student trainees from each of the five SERC disciplines (i.e., industrial hygiene, occupational health nursing, occupational health psychology, occupational medicine residents and occupational safety) worked side-by-side with volunteers from the community to provide the education and screenings. The screenings identified numerous high risk individuals (e.g., high blood pressure) that the onsite OHN followed via their primary care providers. Another outcome is that the employees of the company formed a “Wellness Committee” that continues to provide health promotion and prevention activities for their workforce. Overall, the workers evaluated the experience very positively and the onsite OHN reported that the employees have become much more health conscious and initiated several health promotion activities throughout the subsequent year. Lastly, the SERC student trainees evaluated the interdisciplinary training experience very positively and it is now an annual event.

A joint Sunshine ERC and University of Puerto Rico interdisciplinary series of events was held in Puerto Rico. There were joint field trips to a marijuana grow facility and an order fulfillment center; a jointly offered professional development seminar on heat stress and climate change, and USF trips to a coffee plantation and sugar industry historical site.

Recruitment: We had 16 other recruitment activities that included laboratory tours and information sessions. Moreover, our SERC faculty and staff participated in recruitment activities at regional and national conferences.

Program Outcomes

Occupational Health Nursing

A former master’s and PhD program graduate and a former master’s program and DNP program graduate each obtained new full-time faculty positions one in California and one in Florida and continue their Occupational Health Nurse Practitioner Practice part-time at occupational health clinics.

Two former graduates are in their third year in Doctorate in Nursing Practice (DNP) programs with a focus on occupational health nursing in Florida and Georgia, and one graduate is in her third year of a PhD program at the University of Washington to pursue advanced specialty practice and research in occupational health nursing.

Eight OHN students graduated and subsequently passed their nurse practitioner certification examination on the first attempt and are working in occupational safety and health positions in Florida. All (100%) passed on first time attempt both the national certification examination for adult-gerontology nurse practitioners and the national certification examination in public health, i.e., Certified in Public Health (CPH).

Sunshine ERC at USF

Four OHN students participated in the annual Total Worker Health (TWH) interdisciplinary health fair at Johnson Controls providing health promotion and health protection education and screenings to employees for both the day and evening shift workers.

A current OHN student serves as President of the Florida West Coast Association of Occupational Health Nursing and Editor of the newsletter.

Students and faculty continue to co-author manuscripts focusing on the translation of occupational health and safety research to evidence-based advanced practice with four publications in 2016-2017.

Lastly, Dr. Candace Burns was honored to be selected as a Fellow – American Association of Occupational Health Nursing in April 2017 for outstanding leadership in occupational health nursing.

Occupational Health Psychology

In April 2017 trainee Maryana Arvan gave a talk about occupational health psychology at the Florida Industrial Hygiene conference. After the talk, someone from NASA approached her about coming to the Kennedy Space Center and participating in a one-day session on occupational health along with two people from NIOSH. We got enthusiastic feedback from NASA about the high quality of her presentation.

Five OHP trainees presented at the 2017 Work, Stress and Health conference in Minneapolis June 9-11. Trainee Steph Andel's paper, "Job Dissatisfaction and Verbal Aggression Exposure within the Emergency Medical Services" was a finalist for the Student Research Award.

Occupational Medicine Residency

New trainings and training sites added: A slit lamp training was added at the VA Eye Center and all residents participated in that. A new orthopedic/sports medicine rotation was added at the West Coast Musculoskeletal Institute (WCMI). This is an independent facility that handles clinic and surgeries. It was added to address the previous concerns of more outpatient ortho, suturing and injections. The first resident went there for the month of November and stated he learned a lot. Had an opportunity to see a lot of patients and do a lot of procedures. A new rotation was added at BayCare Urgent Care which operates several clinics in the Tampa Bay area. They are rapidly expanding their Occupational Health services and have hired 2 of our graduates: Dr. Christopher Lee (2016) and Dr. Ronald Figueredo (2017). A new rotation was added at Melbourne Urgent Care for the 2017-2018 year under the direction of Dr. Krishna Vara who is board certified in Occupational Medicine. The second year residents will go when they work on the East Coast during their break in summer classes. He is looking to groom one of our physicians to take over his practice so will be a good opportunity for our residents to showcase their skills. Also starting in the 2017-2018 academic year, we secured a new rotation to take the place of Summitt Heritage. It is with Dr. Jill Rosenthal the CMO of Zenith Insurance. She became one of our didactics presenters last year, a member of our RAC committee and will serve as preceptor for the residents teaching disability guidelines, fitness for duty and the workers compensation system.

Occupational Medicine Residents participated in several outreach teaching activities. Kamal

Sunshine ERC at USF

Patel gave presentations to: Great American Teach in- USF Health Service Corps event – speaking to 2 classes about electrical safety, the Pre-AMSA Medical School Forum – How to be successful in Medical school and medical missions, the Public Health Student Association Community Safety and Health Forum at USF with Dr. Jay Wolfson – covering health disparities, violence and how each organization affect public health and safety. Kamal Patel and Dwayne Wilson presented to the USF Undergrads Minority Pre-Professional Science Society giving an overview of Occupational Medicine. Kamal Patel gave 2 interviews which aired on ABC News. One was on Kidney Transplant: Complications related to kidney transplants and the need for increase in the number of organ donors, and the other was Charcoal: Dangerous side effects of recreational activated charcoal in toothpaste, beverages, and over the counter medications. Ronald Figueredo presented to Hillsborough Community College pre-health professional students an overview of medicine and Occupational Medicine. Kamal is a member of the Hillsborough County Diversity Advisory Council: currently working on a multicultural event that will partner with local minority groups and on educating the youth in Hillsborough County on different cultures present in the county. Kourtni Starkey went to an Active City Conference in Tampa which was a multidisciplinary exchange of ideas intersecting health and urban design. Ronald Figueredo and Kamal Patel worked at the James A Haley VA Wellness fair giving lipid screening results. All residents once again informed workers at Johnson Controls about skin cancer prevention and proper lifting techniques to prevent injury. They also oversaw the administering of Flu shots by medical and nursing students at the College of Public Health Flu Shot drive which is free to the public. Kourtni Starkey received a financial assistance program for the Air Force, will transition back to active duty for two years following residency, at Beale Air Force base as an Occupational Medicine Physician and Flight Surgeon. Presentations and publications: Dwayne Wilson presented a poster at the WOEMA Western Occupational Health Conference and was awarded 2nd place for residents. His poster was on: Ability of PST to discriminate sustainable and non-sustainable heat strain. Ronald Figueredo presented his research: Back and Muscle Endurance as Measured by Ito Test Duration at both the USF Health Research Day in February and the ACOEM American Occupational Health Conference in April in Denver. Dwayne Wilson also presented his research to those same conferences. His research was Ability of physiological strain index to discriminate between sustainable and unsustainable heat stress exposures. Kamal Patel presented his poster on successful reduction in blood pathogen exposure rates – needlesticks at the Deep South Symposia at Auburn University in April.

Ronald Figueredo and Dwayne Wilson both successfully defended their thesis:

Figueredo R, Hanna E, Truncale T, Williams R: (2017) Back Muscle Endurance as Measure by Ito Test Duration, MSPH, University of South Florida

Wilson D, Bernard TE, Salazar R, Wu Y: (2017) Ability of Physiological Strain Index to Discriminate Between Sustainable and Unsustainable Heat Stress, MSPH, University of South Florida

Graduate Theodore Aquino published: Aquino TL, Johnson GT, Truncale T, Harbison RD: Comparison of Urinary PAHs among Firefighters and Asphalt Pavers, Occupational Diseases and Environmental Medicine, 2017 5:39-46

Faculty Publications:

Sunshine ERC at USF

Brooks SM, Truncale T, Sams A: Laboratory Safety of Capsaicin Inhalation in Healthy Younger and Older Populations Potential Template for Inhalation Research, Journal of Allergy Therapy, 2016 Sept; 7:240. doi: 10.4172/2155-6121.1000240

Bradley M, Brief Report: Systematic Vascular Access and Resuscitation via Corpus Cavernosum, Military Medicine Journal, 2016 Nov;181(11):e1491-e1494

Garzon-Villalba XP, Mbah A, Wu Y, Hiles M, Moore H, Schwartz SW, Bernard TE.: Exertional heat illness and acute injury related to ambient wet bulb globe temperature. Am J Ind Med. 2016 Dec;59(12):1169-1176.

Nguyen AH, Giuliano AR, Mbah AK, Sanchez-Anguiano A.: HIV/sexually transmitted infections and intimate partner violence: Results from the Togo 2013-2014 Demographic and Health Survey. Int J STD AIDS. 2017 Jan 1:956462417705970. doi:10.1177/0956462417705970. [Epub ahead of print]

de la Cruz CZ, Coulter M, O'Rourke K, Mbah AK, Salihu HM.: Post-traumatic stress disorder following emergency peripartum hysterectomy. Arch Gynecol Obstet. 2016 Oct;294(4):681-8. doi: 10.1007/s00404-016-4008-y. Epub 2016 Jan 18.

Industrial Hygiene (aka Occupational Exposure Sciences)

The Industrial Hygiene program has changed its name to Occupational Exposure Sciences and remains ABET accredited. The program saw two of its graduates become commissioned officers this past year, following three in the previous year, and there is one more graduating soon. Several of our graduates found jobs with Intel, Sandia, and Lockheed. A doctoral graduate is leading the occupational health and infection control programs for a hospital in Atlanta.

Continuing Education

During the 2016-2017 fiscal year 8,008 individuals were trained through the continuing education program. Training was provided through a variety of venues that include online courses (6,066 participants) as well as in-class (1,942 participants). The impact of this training is best described by stating that interested trainees can access the online classes (a total of 321 classes) any place in the US. The online classes are offered in collaboration with the USF OSHA Training Institute (OTI), an educational institute that has local, state, regional, and national reach.

The In-class training (a total of 56 classes) was offered at several locations in Auburn, AL; Nashville, TN; San Juan, PR; Orlando, and Tampa, Florida. Several of the classes were the result of collaborative efforts between the Sunshine ERC, the Alabama Deep South ERC, and the University of North Carolina ERC. The impact of this program is tangible in Region IV through collaborating with the ERCs and throughout the US through the online educational offerings.