

ILLINOIS OCCUPATIONAL AND ENVIRONMENTAL HEALTH AND SAFETY EDUCATION AND RESEARCH CENTER

**SUMMARY ANNUAL REPORT
July 1, 2009 – June 30, 2010
NIOSH Training Grant
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**SUBMITTED BY:
Lorraine M. Conroy, ScD, CIH
CENTER DIRECTOR
University of Illinois at Chicago
School of Public Health
2121 W. Taylor Street
Chicago, Illinois 60612**

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The Illinois ERC exists to improve, promote, and maintain the health of workers and communities by applying innovative and interdisciplinary approaches to: 1) prepare professionals to be leaders in occupational and environmental safety and health who will direct and manage occupational and environmental safety and health programs, teach other occupational and environmental health professionals, and research issues pertinent to occupational and environmental safety and health; 2) provide continuing education to occupational and environmental health and safety professionals and outreach to workers and communities to improve their knowledge, skills, and awareness of key issues in occupational and environmental safety and health, devoting special attention to the problems and needs of at risk and underserved workers and communities; 3) contribute to the knowledge base in occupational and environmental safety and health by preparing doctoral students, performing faculty and student research on problems of regional, national, and global significance, and disseminating the results of their research; and 4) serve as a regional OS&H information resource.

The University of Illinois at Chicago Occupational and Environmental Health and Safety Education and Research Center (Illinois ERC), a National Institute for Occupational Safety and Health (NIOSH) funded training grant since 1977, completed year two of a five year project period (2008-2013). The ERC provides MS and PhD training in industrial hygiene (IH), occupational health nursing (OHN), occupational safety (OS), and occupational and environmental epidemiology (OEE) as well as occupational medicine residency training (OM), including a MPH graduate degree, and specialized training in hazardous substances (HSAT) and in agricultural safety and health to students in a variety of degree programs (ASHA). Continuing Education components include occupational medicine, occupational health nursing, industrial hygiene, occupational safety, and occupational epidemiology, as well as targeted programs in agricultural safety and health and hazardous substances. CE programs also include initiatives designed to meet the needs of targeted industrial sectors (schools, health care, and agriculture) and special populations including personal care assistants, day laborers, temporary workers, artists, and performers. The Illinois ERC supports two research training programs, a pilot project research training program (PPRT) which provides small grants to new occupational safety and health investigators and a targeted research training program (TRT) that provides support to interdisciplinary research training teams.

2009-2010 Highlights

- During the 2009-2010 reporting year there were 24 masters level trainees (19 with NIOSH support), 20 doctoral level trainees (14 with NIOSH support), 5 undergraduate trainees (all with NIOSH support), and 6 OM residents (all with NIOSH support). Trainees included 15 in IH, 6 in OHN, 6 in OM, 7 in OS, 4 in OEE, 4 in HSAT, and 11 in ASH.
- Fourteen trainees graduated, including 4 MS, 3 PhD, 4 BS, and 3 occupational medicine residents.
- Approximately 50 other trainees took occupational health and safety courses.
- The occupational medicine applicant pool for the current PGY-2 class was larger than usual and of higher quality than in recent years. The residency now has a full complement of residents, all of whom are either graduates of US medical schools or have completed a residency in Internal Medicine. This has made for a strong clinical and didactic environment.
- We added another OM elective rotation at Occupational Medicine Specialists, a busy consulting practice that will add to residents' experience with additional exposure to a private Occupational/Environmental Medicine practice that caters to corporate settings.
- In 2010 the OEE, HSAT, and OS programs received official University recognition as an approved area of concentration, which will now be noted on a graduate's university transcript.
- In May 2010, all current OS trainees participated in the First Responder training course; the course was hosted at UIC and presented by the American Red Cross of Chicago.
- In May 2010, IH and HSAT trainees participated in the HAZWOPER Technician training course.
- In Fall 2009 we formalized our "Process Talk & Tour" series, where an OS, IH, or HSAT trainee gives an industrial process talk at one of the weekly Occupational Medicine Conferences, followed by a site tour to a related industrial facility. Recent process talk/tours include medical device manufacturing, agricultural operations, a public transportation repair and maintenance facility, and food service operations. Participation in the Process Talk & Tour is now a requirement for all OM, IH, OS, IH, HSAT, and OEE trainees.
- In January 2010, OS trainee Ramon Lopez and OS Program Director Dr. Lacey traveled to Cerro Alto, Guatemala, to help address safe drinking water with the UIC Engineers Without Borders Student Chapter.

- In February 2010, the OS Program Director and EOHS Division Director met with Region V OSHA leadership to discuss new potential collaborations.
- The Illinois ERC offered 132 courses for 3286 participants in the traditional occupational safety and health disciplines as well as reaching others active in health and safety in our region.
- The Geolibary (www.geolibary.org) Occupational Health section has 1,951 and the Road Safety Library has 201 training and practice materials. Two "special focus" categories were created: 1) H1N1 (144 training and practice materials and 2) Disaster Response to Haiti (260 training and practice materials).
- The CE program partnered with Health and Medicine Policy Research Group Center on Long Term Care Reform to present the conference "Older Healthcare Workers: Addressing Safety Challenges on the Job" which included expanding partnerships with Community Health Sciences and the Department of Disability and Human Development University of Illinois at Chicago regarding ergonomics and home care workers. The conference had 50 participants and Dr. Jane Lipscomb, PhD, MS, BSN, FAAN, RN was the keynote speaker.
- The More than Training project, with support from the CE program, provided eight OSHA 10 Hour Construction Training sessions for 136 participants with workers' center partners in Chicago, Milwaukee, Cincinnati, and Memphis.
- The AG-CE program organized and presented agricultural health and safety sessions for 1,455 trainees in this program year ranging from a conference to short sessions on safety practices.
- An on-line "Introduction to Occupational Health Practice" three course certificate program was offered to 20 participants from 18 countries. The program includes 3-8 week courses covering fundamentals of occupational health, occupational diseases, and occupational health and safety program management.
- The Fundamentals of Occupational Safety and Health short course curriculum was used to offer a train the trainer course for 90 participants.
- CE continued with its collaboration on the national Black Lung Conference that was held in Lexington, KY for 132 diverse health care provider participants including physicians, nurses and respiratory therapists on September 21-23, 2009.
- The CE program was successful in applying for, and being awarded, approval to offer a NIOSH approved refresher course in spirometry.
- A 3 credit 200 level Health and Safety in the Workplace course was presented for 11 undergraduate students at Indiana University Northwest in Gary, Indiana.
- Leslie Nickels, Marsha Love, John Breskey and Matt Hornyak (2 trainees) completed a report on health and safety in the energy sector related to climate change for the World Health Organization.
- During the reporting period, the PPRT made 6 awards totaling \$86,451. Awardees included 3 doctoral students at UIC, 2 assistant professors at UIC, and 1 assistant professor at Marquette University.
- Since the inception of the PPRT program, 58 projects totaling \$901,265 have been made. Funded projects have helped support 24 junior faculty, 3 post-doctoral fellows, 11 PhD student principal-investigators, and 33 student research assistants for one semester or more. The projects have generated 8 subsequent grant proposals based on the pilot project research findings, 6 of which were successfully funded, 27 presentations at regional or national meetings, 17 reports/abstracts/posters or papers, and 18 publications. Four Pilot Projects received supplementary funding from other sources and 18 resulted or are expected to result in findings used toward research theses.

Awards and Scholarships

- Dr. Robert Aherin was selected by the University of Illinois College of Agricultural, Consumer and Environmental Sciences to receive the Paul A. Funk Award which is the highest faculty award given by the college for outstanding achievements and major contributions for the betterment of agriculture, natural resources and human systems.
- In 2010, OS trainees Matthew Hornyak and Colin Krupczak were awarded Erma Byrd Scholarships from the US Department of Education.
- In 2009, Matthew Hornyak was awarded an American Industrial Hygiene Foundation Scholarship.
- Anders Abelman was awarded the UIC Bruton Workplace Scholarship as well as the UIC SPH Alan W. Donaldson Award, the most distinguished student award of the UIC SPH.

Graduate Employment

- One OM graduate is starting his own Occupational Medicine practice in the Kankakee area, another was hired by a large Occupational Medicine practice in Manhattan, NY, and the third is currently interviewing for positions.

- IH graduates have taken positions with Region V OSHA, Chemrisk, US Dept. of Energy NNSA; one was accepted to UCLA medical school; one is seeking employment.
- Agricultural safety and health trainees have taken positions as a food animal veterinarian, with Deere and Company, with Caterpillar and one returned to help manage the family farm.

Leadership

- Dr. Steven Lacey is currently serving on the AIHA National Board of Directors.
- Mr. Salvatore Cali served on the AIHA Chicago Section Board of Directors.
- Dr. Anders Abelmann (OS PhD trainee, but not supported by the NIOSH training grant) was elected to the AIHA Chicago Section Board of Directors.
- Dr. Lorraine Conroy is currently serving on the NIOSH Study Section.
- Matthew Hornyak is current president of the UIC American Society of Safety Engineers Student Chapter.
- Colin Murphy is current president of the UIC American Industrial Hygiene Association Student Chapter.
- In fall 2009, several OS trainees participated in the American Society of Safety Engineers National Student Leadership Conference in Indianapolis, IN.

Student Presentations (trainees are underlined; [†]NIOSH funded trainee)

- Chukwu A[†]: *Clinical Comparison of the 5th and 6th Editions of the AMA Guidelines on Impairment and Disability*. Presented at the annual AOHC meeting, April 2010.
- Contreras E[†], Buchanan S. *A personal protective equipment distribution program to prevent occupational injuries among Chicago Latino day laborers: A pilot study*. Presented at the American Society of Safety Engineers annual conference, June 2010.
- Kunj S[†], Forst L. *A study on evaluating effectiveness of OSHA's National Emphasis Program on Amputations*. Presented at the American Society of Safety Engineers annual conference, June 2010.
- Catalin B[†], Erdal S, Breskey J, Jacobs D, and Scheff P. *Size-Fractioned Area Concentrations at a Fixed Site Near Urban Demolition Sites*. Poster presented at the American Industrial Hygiene Conference and Exposition, Denver, CO, June 2010.
- Abelmann A, Esmen NA, Indacochea E, Erdal S. *Evaluation of the Metal Content, Concentrations, and Fractions in Welding Fume Using Experimental Design and Regression Analysis*. Poster presented at the American Industrial Hygiene Conference and Exposition, Denver, CO, June 2010.
- Pierce B[†]. *The Use of Sanitary Surveys to Predict Microbial Measures of Water Quality in Chicago Area Surface Waters*. Poster presented at the American Industrial Hygiene Conference and Exposition, Denver, CO, June 2010.
- Pierce JS[†]. *A Novel Method for Reducing the Number of Agents to be Studied in an Occupational Epidemiological Study*. Poster presented at the American Industrial Hygiene Conference and Exposition, Denver, CO, June 2010.
- Catalin B[†]. *Metal Content of Airborne Particulate Matter at a Fixed-Site near Urban Demolition Sites*. Poster presented at the American Industrial Hygiene Conference and Exposition, Denver, CO, June 2010.
- Lopez R[†]. *Assessing Aerosol Exposure While Recreating on the Chicago Waterways by Using a Microbial Indicator*. Poster presented at the American Industrial Hygiene Conference and Exposition, Denver, CO, June 2010.
- Breskey JD[†]. *Characterization of Stainless Steel Welding Fume Particles Generated During Laboratory-Based Emission and Exposure Experiments*. Poster presented at the American Industrial Hygiene Conference and Exposition, Denver, CO, June 2010.
- Patel C[†], Esmen N, Lacey S, Kennedy K. *Examination of Randomly Censored, Historical Metal Dust Exposure Data from a Jet Engine Manufacturer*. Poster presented at the American Industrial Hygiene Conference and Exposition, Denver, CO, June 2010.
- Miller CD[†], Aherin RA. *Farmers with Disabilities: Why Better Data Collection is Necessary*. Technical paper accepted for publication & presentation at the National Institute for Farm Safety Annual Conference, Wilmington, North Carolina, June 2010.
- Each of the PG3 residents presented their research projects during the Weekly Didactic Residency Curriculum sessions. Each project was presented in three phases: Literature Review, Methods, and Final Presentation.

Publications

- In 2009 and 2010, ERC faculty, staff, and students contributed 87 publications. For a list of publications, please visit our website: www.uic.edu/sph/erc

