

**ROCKY MOUNTAIN CENTER FOR OCCUPATIONAL AND ENVIRONMENTAL
HEALTH - EDUCATION AND RESEARCH CENTER FOR OCCUPATIONAL
SAFETY AND HEALTH**

SUMMARY ANNUAL REPORT

July 1, 2007-June 30, 2008

NIOSH Training Grant

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Administration

In 2007-08, the RMCOEH continued to meet all goals and objectives. The RMCOEH holds monthly Center Executive Committee meetings, biannual RMCOEH Advisory Board meetings, Advisory Board Executive Committee meetings and RMCOEH annual retreats. There were several major advances.

- The RMCOEH obtained new, line-item funding from the Utah State Legislature in the 2008 General Session specifically earmarked for Occupational Safety and Health (OSH) at the RMCOEH. The appropriations are \$100,000 in one-time funding and \$150,000 in ongoing funding.
- The RMCOEH has received approval for the new, accredited Master of Occupational Health and Master of Science in Occupational Health Degree Programs from the Board of Regents. We also applied for ABET-ASAC and ACGME accreditation.
- The RMCOEH hired 2 new faculty and we are recruiting 2 more (IH, OM, OIPRT, E&S).
Space planning was begun to increase RMCOEH office, lab and classroom space.

Diversity Recruitment

Diversity recruitment efforts continued. Four underrepresented minorities students applied and one was accepted into the programs (others were not qualified or did not accept). Drs. Collingwood and Sesek began working with Sweeney Windchief, Assistant Dean for Diversity at the U. of Utah, to host tours of the RMCOEH as part of the 2008 Society for Advancement of Chicanos and Native Americans (SACNAS)

conference to be held October 9-12, 2008 in Salt Lake City. Approximately 200 high achieving Hispanic and Native American students will be in attendance. Dr. Blomwick hosted two Native American engineering students as part of the UU Graduate School Diversity weekend in AY 07/08 and has coordinated with representatives of Northern Arizona University (6th in the nation for Native American engineering graduates) to schedule a visit by RMCOEH personnel. Plans are being formulated to travel to Salish Kootenai College in Pablo, Montana to visit with prospective IH/HSAT students. We have made contacts with the National Hispanic Medical Association and the Latino Medical Student Association to offer rotations and shadowing opportunities for prospective OM residents.

Statistical Economic Evaluation Unit (SEEU)

The SEEU served as a resource to the Center in providing the statistical and economic tools for evaluating interventions to improve workplace health and safety. The SEEU has contributed throughout the year in providing insights, including lectures to trainees conveying the rudiments of cost assessment and cost-effectiveness techniques. The co-director of the unit, Dr. Norman Waitzman, along with his colleague in the economics department, Dr. Peter Philips, directed a discussion of the role of prequalification of subcontractors in a meeting of a group of safety officials from mainly large firms in RMCOEH's records, which resulted in an online questionnaire to RMCOEH industrial community, the analysis of which contributed to a large report on such pre-qualification practices delivered to the sponsor, ORC Worldwide on December 31, 2007.

Outreach

Outreach continued to be a significant emphasis at the RMCOEH, with the goal of helping to ensure that knowledge is translated into practice. The Center policy that requires measurable outreach activities by each faculty member each year was further implemented. Thousands of contact hours are recorded annually. For example, in 2007-2008, over 2,000 contact hours were given in presentations alone, including over 500 contact hours of CME/CEUs in addition to CME/CEU in the CE & HST programs.

Pilot/Small Projects Research Training (PPRT)

The 3 investigators who received awards in 2007 have made excellent progress. Dr. Collingwood's study was on track and will be completed in 2009, as planned in his proposal. Dr. Drinkaus has submitted a final report and is preparing the report for submission to a peer-reviewed journal. Ms. Hart also made significant progress. As planned in 2007, the 2008 program announcement was posted in March 2008, significantly earlier than in 2007. The due date for applications was 15 May 2008, and we received six proposals. The earlier posting and submission dates permitted review and scoring of the proposals by the Scientific Review Committee (SRC) in May and June 2008 with a conference call to select recipients on 18 June. One proposal was funded by the parent organization, and 3 of the remaining 5 proposals were selected for funding. In addition, the second year of Dr. Collingwood's study was funded. The three new proposals funded were by Dr. Thiese, (RMCOEH) "Slips, Trips, and Falls Among Commercial Truck Drivers"; Dr. Rosecrance (Colorado State University) "Reliability of Assessing Occupational Exposures to Awkward Positions in Appliance Manufacturing"; and Dr. Saito (Colorado State University) "Chemical Analyses of Bacterial Composition and Potency in Agriculture. The Pilot/Small Projects Research Training Management Committee met on 22 July 2008 and made minor revisions to the application and review procedures to expedite processing in 2009.

NORA Research Project

The LBP cohort study continued. We have not enrolled more subjects in the past year, rather we have concentrated on completing the baseline and follow-up job physical factor analyses (mostly videotape measurements). We began performing in-depth statistical analyses and anticipate preparing major publications shortly.

Ergonomics & Safety (E&S)

The E&S Program trained 10 trainees (7 M.S., 3 Ph.D.) of whom three graduated during the AY (2 M.S., 1 Ph.D.). The two M.S. graduates are employed as an Environmental and Safety Coordinator for Questar and Environmental Engineer for Energy Solutions in SLC UT respectively. The Ph.D. graduate is employed as a Research Engineer for Medicine Lodge in Logan UT. The academic program now consists of eight 3-credit courses offered on a regular basis. All topics (both “highly recommended” and “recommended”) noted in the NIOSH Guidelines for Graduate Programs in Occupational Safety (by The Occupational Safety Academic Training Program Panel) are covered in the M.S. and Ph.D. program courses (or pre-requisites). All E&S students presented their research at the successful, annual Regional National Occupational Research Agenda (NORA) Young/New Investigators Symposium. The interdisciplinary course “Occupational Health Solutions” has been refined even further and is a great success. The course is team taught by Drs. Sesek, Collingwood, and Wood (IH, E&S, and OM cores). This course includes on-site student projects completed by interdisciplinary teams from RMCOEH (IH/HSAT, OM, OIPRT, and E&S) who visit local manufacturing facilities and work together to solve real world health and safety problems. It is a required capstone course for all trainees. The off-site ATK M.S. Mechanical Engineering Program has grown to 40 active students, of whom approximately 30% focus on Ergonomics and Safety as their area of emphasis and take 3-5 E&S courses.

Industrial Hygiene (IH)

The IH program continued to meet its goals and objectives. Two students graduated from the program with four matriculating into the IH program bringing the number of IH students to five full-time and 4 part-time students. The IH Program continued research projects into health effects of smoke inhalation among firefighters. Students are involved in these research projects, including one student developing exposure estimation algorithms for firefighters involved in various types of fires and site cleanup activities after fires. Another major research project is the National Children’s Study, in which the IH Program leads the environmental assessment team. We requested transfer of the ABET-ASAC accreditation for the IH and HSAT programs from the MSPH degree to the MSOH degree. Once that is received, it is expected to be easier to recruit military personnel into these programs as well as to better train our students in OSH. As a result of the availability of the new Master of Science in Occupational Health (MSOH) degree to IH students, the number of students in the program is expected to grow significantly in the next few years.

Hazardous Substances Academic Training (HSAT)

The HSAT program continued to meet its goals and objectives. One student graduated from this program. Two new students entered the program bringing the number of HSAT students to four. In addition, because of diversity recruiting, one of the new HSAT students is of Hispanic ethnicity. In March, 2008 Dr. Leon Pahler replaced Dr. Rod Larson as Director of the HSAT Program. Also during this last period, the new annual “Quantitative Risk Assessment” course (FPMD 6730), which is now required to be taken by all HSAT students, was held. Another project involved researching the current status of exposure limits for police officers potentially exposed to methamphetamines. Recommendations were formulated for safe exposure limits for concentrations of methamphetamine on surfaces and were provided to the Utah Dept. of Health for

consideration in establishing new Methamphetamine standards. The HSAT students were involved in multiple research projects, also including one project to evaluate dispersion of potentially hazardous materials resulting from implosion of a high-rise building containing silica and lead. Another study was to evaluate methods for monitoring diesel particle emissions in underground mines using various types of monitoring methods, with a focus on particle concentration by particle size and particle count, as well as particle composition.

Occupational Injury Prevention & Research Training (OIPRT)

The OIPRT program continued to meet its goals and objectives. The program trained 3 PhD level trainees of whom one graduated during the AY. The graduate is employed in academia. The two primary goals from the last grant submission, (1) provide quality Occupational Safety Engineering (OSE) and Occupational Injury Epidemiology (OIE) academic programs, and (2) accomplish NORA-related OSE and OIE research and translate it into practice (r2p) have been accomplished. The academic program integrates engineering and epidemiology with students in the OSE program emphasizing engineering and students in the OIE program emphasizing epidemiology. Students completing the OSE Program receive a Ph.D. in M.E. and students completing the OIE Program receive a Ph.D. The OSE and OIE curricula cover all of the topics noted in the NIOSH Guidelines for Programs in Occupational Safety All OIP Students were involved in two large prospective NIOSH-funded research projects: Upper Limb Musculoskeletal Disorders - Quantifying Risk and/or Low Back Pain - Quantifying Risk Factors and, in addition to journal submissions, presented their research at the annual Regional National Occupational Research Agenda (NORA) Young/New Investigators Symposium, which has been held on the University of Utah campus since 2003.

Occupational Medicine (OM)

The OM residency program has trained a total of 72 highly skilled OM physicians filling a critical need in DHHS/NIOSH Region VIII, which is underserved. During the period of 07/01/07-06/30/08, 7 residents were enrolled in the program with 4 residents in the academic PGY-2 year, and 3 residents in the practicum PGY-3 year. Current academic training consists of completion of graduate education over a period of 3 semesters leading to the MPH degree. In the past year, we have developed a new curriculum for OM residents leading to a Master of Occupational Health (MOH) degree designed to more specifically meet the needs of contemporary state of the art OM practice. We are awaiting Accreditation Council for Graduate Medical Education (ACGME) approval for this change. The anticipated matriculation date for residents in this MOH program is July 2009. We also anticipate increasing the number of residents through the US Air Force. Clinical and research activities continue as in the past year. The program is developing updates to clinical practice guidelines by the American College of Occupational and Environmental Medicine (ACOEM) to improve care of injured workers.

Continuing Education (CE)

The CE Program met its goals and objectives. Attendance remained high with 3,082 trainees attending 147 CE activities. This includes both traditional (3,050 trainees) and online (32 trainees) activities. The program also made significant progress in offering distance education. For example, the WebCT-based course entitled *Occupational Health and Safety* was held in April 2008. In addition, the CE program has offered a number of online OSHA courses during this grant period through a cooperative agreement with a commercial provider. The CE program offered a number of courses in surrounding areas to enhance regional coverage. Courses were conducted in Moab, Utah, Green River, Wyoming, Pocatello, Idaho, West Yellowstone, Montana, Chicago, Illinois and New York City, New York. The most significant needs assessment activity conducted this year was the regional needs assessment done in collaboration with the new Colorado Education and Research Center

(ERC). Finally the CE Program offered three Asbestos Worker Refresher Courses in Spanish. In addition, Utah State approvals were obtained for an initial Asbestos Worker course in Spanish.

Hazardous Substance Training (HST)

The HST Program met its identified goals and objectives. 492 trainees attended 34 HST courses. Four new courses were offered: 1) Chemical Compatibility and Storage, 2) Emergency Preparedness and Business Continuity, 3) Hazardous Materials Technician, and 4) Methamphetamine Decontamination: Utah Policy Rules and Best Practices. Regional needs assessments are distributed every other year (latest May 2008) to government agencies as well as other facilities and organizations with a projected need for hazardous substances training.