Lifting Equipment Proves Protective to Nurses

The provision of patient lifts, and access to them when it counts, can significantly contribute to the reduction of injury and improvement of job control among nurses, according to new research from UCSF.

Community Health Systems at UCSF’s School of Nursing.

Mechanical lifts have been shown to reduce the risk of musculoskeletal injury from patient handling. They are used in hospitals and other medical settings to safely transfer patients with reduced mobility. Patient handling tasks account for up to sixty-six percent of all musculoskeletal injuries among health care workers, the authors point out.

For the study, researchers surveyed 361 nurses randomly selected from the American Association of Critical-Care Nurses. Respondents worked in a variety of settings including intensive care, trauma units, operating rooms, and emergency departments. The survey asked nurses to report any pain, aching, stiffness, numbness, and tingling in the last 12 months and its frequency, duration, and severity. Nurses were also asked if work caused their pain or made it worse.

Respondents reported on their access to lifting equipment, use of lifts, and details about their place of work.

“Our study shows that making lifting equipment readily available and removing barriers against lift use are both key to injury prevention,” says lead author Soo-Jeong Lee, assistant professor in the Department of Community Health Systems at UCSF’s School of Nursing.
Letter from the Director

I write this Director’s Letter with sadness for the loss of Pat Buffler. As the adjun-
gent story amply documents, Pat was a true leader of occupational and environ-
mental epidemiology. More than that, she was a wonderful person who often had a
twinkle in her eye and delighted in furthering the careers of students and
younger faculty. She was always warm and welcoming to me, and she advocated the
faculty at the UC Berkeley School of Public Health. She was a major supporter
of the COEH because as Director of the Southwest Occupational Health and
Safety Educational Research Center, she understood the needs of our training
programs. Pat always had a special fond-
ness for our Labor Occupational Health Program. We miss her, but the legacy of
her work will live on.

Most of you know of Pat’s ground-
breaking research on environmental and genetic determinants of childhood leuke-
emia risk, but I first became aware of Pat from a different contribution. While still
at the University of Texas School of Public Health in Houston during the 1980s, Pat
led one of the first panel studies of the impact of daily exposures to air pollution on
the health of asthmatic individuals. What was particularly innovative about
this study was the care that Pat and her colleagues took to monitor personal expo-
sures of the participants because she knew that high-quality exposure assessment
was necessary to detect the relatively small, but real air pollution “signal” in
terms of adverse effect on asthma symp-
toms. The recognition that collaboration with exposure scientists was critical to the
conduct of environmental epidemiologic studies was a lasting feature of Pat’s work.

With Pat’s contribution in mind, I would like to highlight several studies involving
COEH investigators that have been published recently, which represent major contri-
butions to our understanding of the adverse health effects of air pollution. Amy Padula and colleagues, including COEH faculty member, Katie Hannigan, reported in the American
Journal of Epidemiology (2013 May 5;177(9):747-58) that in utero exposure to
traffic-related air pollutants was associated with neural tube defects in newborn
children from the San Joaquin Valley in California. The results of this study increased our understanding of the risk of birth defects due to air pollution.

Another COEH faculty member, Michael Jerrett, had a paper published in the American Journal of Respiratory and Critical

The 2014 COEH M. DONALD
WHORTON WRITING AWARD

Students and recent alumni (within 5 years of graduation) from COEH-affiliated programs are eligible to submit a manuscript for consideration. Papers may be co-authored; however the student/alumnus must be first or senior author. Papers must be recently pub-
lished or accepted for publication.

Learn more at: http://coeh.berkeley.edu/
students/WhortonAward.html

Due Date
February 14, 2014

Patricia Buffler, Renowned Childhood Cancer Researcher, Passes Away at 75

Patricia Buffler, an internationally esteemed researcher known for her work on some of the world’s largest
studies on childhood leukemia and environmental health, and a former dean of the University of California,
Berkeley’s School of Public Health, has died.

Buffler died of a stroke while in her car, possibly dating to her evening. September 26. She was 75.

At the time of her death, Buffler, who held UC Berkeley’s Kenneth
and Marjorie Kaiser Chair in Cancer Epidemiology, was leading several large research projects related to childhood leukemia and other childhood cancers. Among
them is the California Childhood Leukemia Study, which Buffler launched in 1995 to investigate the
relationship between diet, genes, infections, and environmental exposures and childhood leukemia. With over 1,300 cases of childhood leukemia included to
date, the study is one of the largest in the world, with an unparalleled breadth of exposure and genetic data.

Buffler was also principal investi-
gator of the Center for Integrative Research on Childhood and Environmental Health, funded in 2010 by the National Institute of Environmental Health Sciences and the U.S. Environmental Protection Agency (EPA) to study the role of prenatal and early life
exposures to carcinogens in the development of childhood leukemia.

Over the years, Buffler’s studies yielded findings that include the potential pro-
tective effect of attending day care as early as 12 months of age on the risk of leukemia. Because of her work, we
now have a better understanding of a rare disease. Her loss is enormous.”

A Unifying Force

Colleagues credited Buffler’s skills in leadership and organization in bringing disparate groups together to advance research. Reingold noted that because childhood leukemia is rel-
atively rare, Buffler recognized that it was critical to form large networks and
international collaborations that could yield powerful data.

To that end, Buffler established in 2006 the Childhood Leukemia International
Consortium, a widely acclaimed international consortium for studies of childhood leukemia funded by the National Cancer Institute and the Children with Leukemia Foundation (now Children with Cancer Foundation). This group continues to be a major force in the development of leukemia research.

Patricia Buffler, professor of epidemiology, dean emerita of the School of Public Health, and dear friend. Photo courtesy of Jim Bligh.

Buffler was scheduled to travel to France the day after she died to chair the consortium’s annual meeting, start-
ing on Tuesday, Oct. 1.

“Pat has unified people nationally and internationally in the field of children’s health and exposure to toxins,” said Brenda Eskenazi, UC Berkeley pro-
cessor of epidemiology and another leading expert on the environmental influences on children’s health. “She was such a leader in her field, and such an example of grace and intel-
ligence, especially for the women in our department.”

While best known for her work on childhood cancers, Buffler’s work covered a broad range of environ-
mental health issues, including the effects of secondhand tobacco smoke and electromagnetic radia-
tion. In the 1980s, Buffler chaired a scientific advisory panel formed by the federal Indoor Air Quality Association to evaluate the risks of miscarriage among its workers.

“I have never seen anyone so skill-
fully negotiate such incredibly tricky situations that helped get industry buy-in for what the researchers needed to do,” said panel member
Ber S. Katharine Hammond, UC Berkeley professor of environmental health, and a former faculty member at the University of Michigan. “I was in awe watching her.”

Hammond noted that, as a result of the panel’s final report in 1992, the industry discontinued the use of the most toxic chemicals.

The Path to UC Berkeley

Buffler was born August 1, 1938, in Doylestown, PA. When she enrolled in
the Catholic University of America in Washington, DC, she became the first
person in her family to go to college. She graduated in 1960 with a bach-
elor’s degree in nursing and biology, and then moved to New York where she served as a public health nurse in
Harlem.

While she was in New York, Buffler met her future husband, Richard Buffler, a
continues to page 4
U.S. Navy communications officer stationed in Rhode Island, on a blind date. The couple married in 1962 and soon moved to California. While Richard Buffler obtained his Ph.D. in geology at UC Berkeley, Buffler worked as a public health nurse in Alameda County. She then earned her master’s in public health in 1965, and a Ph.D. in epidemiology in 1973, both at UC Berkeley. From 1974 to 1991, Buffler held various faculty positions at the University of Texas, starting as an assistant professor in the Department of Preventive Medicine and Community Health in Galveston, and leaving as a full professor of epidemiology at the School of Public Health at the University of Texas Health Science Center at Houston. While in Texas, she also directed the Epidemiology Research Unit at the University of Texas Health Science Center at Houston. Buffler began her distinguished 22-year tenure at UC Berkeley in 1991, when she joined the faculty as professor of epidemiology and dean of the School of Public Health. As dean, a position she held for seven years, Buffler led the closure of old programs, such as Health Education, and started new ones, including Health and Safety Behavior and Public Health Nutrition. She also formed the Dean’s Policy Advisory Council and launched the school’s annual Public Health Heroes Awards.

A Mentor and Advocate

As much as Buffler was admired and respected for her research contributions, she was loved for the way she mentored and advised junior faculty, colleagues, and students at the School of Public Health. Buffler helped guide the development of junior faculty, lobbied for election to the prestigious Institute of Medicine for seasonal researchers, advised on mediations in tenure cases, and hosted well-received lunches for women faculty in her department.

“When it came to helping her faculty colleagues, the school or the campus, she was never one to say no,” said Lisa Barcellos, UC Berkeley associate professor of epidemiology. “She rarely took a sabbatical. She was always planning to take one next year, and I think it would’ve been her first in 10 years. She was one of a kind.”

Patricia Buffler, Renowned Childhood Cancer Researcher, Passes Away at 75

Foundation and mailed to the School of Public Health, University of California, Berkeley, CA 94720-7360. The name of the fund should be noted on the check. Those wishing to donate online may do so at: http://giveutexas.berkeley.edu/buffer. Written by Sarah Yang, UC Berkeley Media Relations, September 30, 2013.

In Memoriam

Pat Buffler was a breath of fresh air when I was Director of the Texas Pesticide Program from 1986-1990. Pat was then a Professor in the Department of Health Education, and held the position of Public Health and Director of the Southwest Center for Occupational Health. At that time, there were very few in Texas concerned with the health of farm workers and the need for government regulation based on sound science and regulatory philosophy. Pat was evidence based and her advice always was powerful. I served on her Advisory Board for the Center, where she worked tirelessly to advocate for worker health and safety protection. Her dedication was saddened by news of her death, she had much to contribute.

Eugene G. Widess

Formar Chief of Cal/OSHA

Until I came to the SPH from UCSF, I really didn’t know Pat Buffler except by name and through her research. Hence, it was such a gift to get to know her — even though our talks were too often limited and involving deadlines and NIOSH reports, however, each conversation we had was marked by a graciousness and civility missing in so many interactions these days. Pat was, of course, a scientist, and she was so dedicated to the well being of others, of the School, and her advice to me was heartfelt. One of the unexpected things I learned was that Pat was a published author of a book on nursing theory. At the office was how much nursing theory means to Pat. There were so many people who will treasure time spent with Pat, and who will miss her deeply. Pat was surrounded among those so lucky and sad.

Marion Gilien

Former COEH Deputy Director

Pat’s dedication to her students was legion, and her advice to me was meaningful to me to get to know her – even though our talks were too often limited and involving deadlines and NIOSH reports, however, each conversation we had was marked by a graciousness and civility missing in so many interactions these days. Pat was, of course, a scientist, and she was so dedicated to the well being of others, of the School, and her advice to me was heartfelt. One of the unexpected things I learned was that Pat was a published author of a book on nursing theory. At the office was how much nursing theory means to Pat. There were so many people who will treasure time spent with Pat, and who will miss her deeply. Pat was surrounded among those so lucky and sad.

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Researchers from the Occupational Biomarkers Laboratory at UCSF David Davis suggest wearing a weight transfer device while working, as a stopped posture may reduce the risk of developing lower back disorders, a widely held problem in occupations such as agriculture and construction.

The study by lead investigator Fadi Fathallah, director of the University of California at Davis’ Agricultural Ergonomics Research Center, included 10 people between the ages of 18 and 50. The experiment was conducted in a lab environment, where a worker might encounter in a typical workplace. The tasks were imposed with and without the weight transfer device. Laboratory participants wore an apparatus to constrain movement of the pelvis so that motions remained restricted to the spine.

Ergonomics Intervention: Personal Weight Transfer Device Improves Back Pain

Nurses with a high-level of lift availability were fifty percent less likely to have work-related low back pain, while nurses with a medium-level of lift availability and usage were seventy percent less likely to have work-related shoulder pain.

“Nurses with higher access to lifts also reported greater job control and reduced job stress, according to a survey of California nurses following the implementation of California’s Hospital Patient and Health Care Worker Injury Protection Act (AB 1136), which came into effect January 1, 2012. Lee found sixty-one percent of hospital nurses now have access to lifts. "There has been an improvement,” says Lee. “But the new legislation requires acute care hospitals to provide a lifting device, so I expect the number to increase.”

Posture, compression, and force to the spine at the L5-S1 level can be reduced by up to thirty percent with the weight transfer device authors predict. Internal loads to the leg joints may be reduced from ten percent to thirty-one percent. The authors recommend further study to assess whether wearing the device has any long-term effects, but it may prove to be an effective intervention for workers who perform repetitive tasks while in a stooped position and others with existing symptoms of lower back pain.

Results of the research appeared in the Journal of Electromyography and Kinesiology. The study received funding from the Western Center for Agricultural Health and Safety and the Henry A. Jastro and Peter J. Shields Graduate Research Scholarship at UC Davis.

David Rempel, professor of Medicine in the UCSF Division of Occupational and Environmental Medicine and director of the joint Berkeley and UCSF Ergonomics Program, is an advisor to OSHA on AB 1136. Currently, Cal/OSHA is working with the Occupational Safety and Health Board to adopt and implement its Safe Patient Handling Regulations. The passage occurred on September 19, 2013.

Dr. Lee’s study appeared in the International Journal of Nursing Studies and was co-authored by Julia Faust, associate professor emerita in the Department of Community Health Systems at UCSF’s School of Nursing, Marion Gilien, retired deputy director of COEH and clinical professor, UCSF, and Tobias Krause, director of the Southern California Education and Research Center at UCLA.

Funding came from the American Association of Occupational Health Nurses Foundation, the Sigma Theta Tau International Alpha Eta Chapter, the UCSF Graduate Division, and the UCSF School of Nursing Century Club. Dr. Lee’s follow-up investigation in 2013 received separate funding from the Southern California NIOSH Center.
COEH Students Take Flight

Understanding Disease Transmission in China and Thailand

Tomás León always wanted to work internationally. He started with a trip to Asia in 2011 to investigate the environmental factors shaping the transmission of liver flukes specifically Clonorchis sinensis in Thailand and Clonorchis sinensis in China.

“At first I wanted to work internationally. I’m living my dream,” says Tomás León. In Kunming, China, León worked with Dr. Banchob Sripa on a study at the University of Pretoria. The study is one of the main industries in the area. It’s also one of two hot spots in China for the prevalence of cholangiocarcinoma, a form of liver cancer on the increase worldwide often triggered by liver flukes, León’s parasite of interest.

León leveraged his experience in Thailand to lead a second project in the city of Jiangmen located in South China. Working with the local Department of Public Health, he drew up plans to sample water, fish, and fresh water snails – quantitative data he would later analyze as part of his thesis.

León, a masters student in Environmental Health Sciences, aims to discover if hydrology and the construction of fish ponds affects the burden of these parasites, which spread to humans mainly through food and fish that is raw or under cooked. Fish is a dietary staple in many Asian cultures, and as populations have risen, so has the appetite for fried fish and pond food.

“In a lot of research on these particular parasites, the medical side of the picture, namely, how they affect people’s health, is not really looked at,” says León. “But in order to understand the environmental factors that influence their transmission, we need to understand the lakes and ponds of Thailand and China.”

There is a lot of research on these particular parasites, and the medical side of the picture, namely, how they affect people’s health, is not really looked at,” says León. “But in order to understand the environmental factors that influence their transmission, we need to understand the lakes and ponds of Thailand and China.”

“The increasing globalization of China has impacted food choices in Hua’s study neighborhoods. ‘We have definitely seen more stores popping up with imported food, and there’s a new diabetic specialty store, signifying diabetes rates are on the rise,’” says Jenna Hua, who received a Suzanne Llewellyn COEH Student Project Award.

In August, 2013, the International Society of Exposure Science (ISES) recognized UC Berkeley doctoral candidate Colleen Reid in its 2013 Student Poster Award competition at its 23rd annual meeting held in Basel, Switzerland. She received an Honorable Mention in a competition of 35 entries. Reid, from the Environmental Health Sciences in the School of Public Health, will receive a free one-year student membership in ISES and an online JSEES journal subscription.

Hua evaluated eleven different statistical models to estimate population exposure to smoke during wildfires using data from twelve sources including satellite data from NASA, and monitoring data from the US Environmental Protection Agency and the California Air Resources Board.

It’s important to be flexible and explore your options on the ground,” says Jenna Hua, who received a Suzanne Llewellyn COEH Student Project Award.

In South Africa, the government spraying indoor walls of people’s homes with insecticides to control malaria, a disease that in some regions of the country proves fatal in over ninety percent of cases. Yet scientists like Fraser Gaspar are increasingly concerned about the health impacts, particularly among susceptible populations such as children and pregnant women.

Gaspar, a PhD student in Environmental Health Sciences at UC Berkeley, traveled to rural villages in the Province of Limpopo in South Africa, just south of the Zimbabwe border. As part of his thesis field work, he measured indoor levels of the insecticide dichlorodiphenyltrichloroethane, or DDT, in dust samples taken from 50 homes and assessed prenatal serum levels in 750 women living in local villages in collaboration with Brenda Eskenazi and Jonathan Chevrier at the Center for Environmental Research and Children’s Health, and Riana Borman at the University of Pretoria.

DDT has previously been associated with developmental delays in early childhood. Gaspar hopes his research will help inform risk assessment debates on the implications of indoor residual spraying with a goal of understanding malaria in a way that is effective, but still safe.

“I went to South Africa as an undergrad and fell in love with the culture,” says Fraser Gaspar. “When this project came up I was interested in the research and the area. It’s a win-win.”

Gaspar says it’s key to tailor global health projects to include issues important to the local community. “We are interested in neurodevelopment, for example, but we make sure our study collects other useful information on HIV and malaria. For example, we’re working with the malaria control department tracking the areas sprayed for malaria control – we’re interested in exposures and health effects, but the malaria control department is interested in covering areas they need to spray.”

Global Environment and Obesity

Funded by the Center for Global Public Health, Jenna Hua traveled in July to Kunming, the capital of Yunnan province in southwest China. Her goal was to collect a third round of data for her dissertation examining how food environments influence childhood obesity and metabolic risk. Hua is a PhD student in Environmental Health Sciences.

China’s rapidly growing obesity levels - greater than twenty-five percent in some cities – make it “a natural laboratory for studying how developments in the built environment affect health,” says Hua. Her study compares children’s height and weight over time with physical activity patterns and changes to their food environment.

In China for ten months on a Fulbright Scholarship, Hua says “for anyone who wants to work internationally, it’s important to be flexible.” For example, her collaborators at Kunming Medical University originally said she could access electronic medical records for all kindergarteners in the city, but without warning, they limited enrollment to one school. Undeterred, she tapped into local contacts to recruit high school students to meet her objectives.

“The best way of getting data is to build connections,” says Hua. “You have to explore your options on the ground.”

DDT is sprayed indoors to control the spread of malaria.
Climate Change Linked to Global Respiratory Health Issues

A new book co-edited by Dr. Kent Pinkerton of UC Davis represents the first comprehensive attempt to examine the effects of climate change on respiratory health at an international level.

In 2010, the American Thoracic Society hosted a climate change workshop in New Orleans led by Dr. Pinkerton, the chair of the Society’s Environmental Health Policy Committee. “We saw climate change as a big issue, but we didn’t really feel as though the health community of pulmonary physicians had the means by which to address or understand it,” said Dr. Pinkerton, director of the UC Davis Center for Health and the Environment and professor in the School of Medicine.

Organizers sought a global outlook, inviting experts from Europe, the United States, Canada, Africa, India, Japan, Korea, Turkey, and the Caribbean. “The workshop in 2010 resulted in a Statement by the American Thoracic Society that contained twenty-seven key recommendations to address research gaps in the future,” noted Dr. Pinkerton. The groundbreaking book developed from the workshop and fills a major gap in the literature on respiratory health and climate change.

“The number of pathways through which climate change can affect the health of populations makes this environmental hazard one of the most perilous and intricate challenges we face this century,” noted contributing author Jonathon Patz from the University of Wisconsin. The book by Pinkerton and colleagues underscores the most urgent issues nationally and internationally and offers a valuable tool for health professionals at the forefront of assisting communities at risk.

In addition, Erika Sasser and C. Andrew Miller from the U.S. Environmental Protection Agency summarize the Agency’s findings on the health risks associated with GHG emissions and outline their regulatory efforts to limit their impact on public health and the environment to protect current and future generations. Compelling testimony of climate change underway, such as the decline of arctic snow and ice, comes from contributing authors Will Steger and Nicole Rom. Steger, famous for his arctic treks, took 31 days to ski every step of the Larsen Ice Shelf in Antarctica, which has since collapsed. Chronicling the “new normal” in the Arctic – more open water and thinner ice – they examine its effect on inuit communities dependent on the melting landscape for centuries.

California in Action

Pinkerton notes how California has been at the forefront internationally on issues of air quality and climate change. “We wanted an emphasis on the California perspective,” he said. COEH Director John Balmes contributed a chapter on California’s Cap and Trade Program, one of the state’s strategies to reduce greenhouse gas (GHG) emissions to 1990 levels by the year 2020 in keeping with the Global Warming Solutions Act of 2006 – the landmark regulation that sets enforceable GHG limits on industry and government agencies effective January 1, 2013.

Dr. Balmes, who helps implement the legislation as the physician member of the California Air Resources Board (CARB), describes Cap and Trade as one step among many that are required to significantly mitigate climate change, “a global problem requiring global solutions.” His chapter cites the historic link of California’s Cap and Trade program with the Canadian province of Quebec’s program effective January 1, 2014, as a poignant example of CARB’s international efforts to reduce GHG emissions.

Federal Health Policy and Climate Change

Maya Levine and John Balbus from the National Institutes of Health Sciences offer a brief history of federal programs in a chapter on climate change and health research. Elsewhere, five authors from the Center of Disease Control and Prevention (CDC) provide an insider’s look at climate change adaptation and public policy at the CDC, including how it is readjusting state and local health departments for the challenges ahead.

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The Human Costs of US Agriculture

Author Seth Holmes, a cultural anthropologist and public health physician, spent eighteen months immersed in the daily struggles of Mexican migrant farm workers. In Skagit Valley, Washington—famous for its strawberries—he lived in a labor camp for five months, working side-by-side with fellow pickers and interviewing workers and farm owners. Over the next three months, Holmes followed California’s Central Valley through the Arizona border. Apprehended and detained for crossing the border, Holmes spent eighteen months immersed in the lives and well-being of the people providing us cheap, fresh fruit and vegetables. His resulting book, *Fresh Fruit, Broken Bodies*, presents a deeply researched account of the social and economic inequalities facing Mexican migrant workers in the context of Mexico-US migration.

“Each year, the United States employs nearly two million seasonal migrant farm laborers,” Holmes said in a presentation at UC Berkeley’s Center for Latin American Studies. “Over eighty percent of farm employees are immigrants. Ninety-five percent of these workers are born in Mexico and fifty-two percent are undocumented.”

With an occupational fatality rate over five times the national average, Holmes, they are among the most vulnerable workers in the nation. “Of agricultural workers, migrant and seasonal farm workers suffer the poorest health. Despite poor health status, only five percent of migrant workers have health insurance.”

“The book is a gripping read not only for cultural and medical anthropologists, immigration and ethnic studies students, students of labor and agriculture, physicians and public health professionals, but also anyone interested in the lives and well-being of the people providing us cheap, fresh fruit and vegetables,” Holmes said in a press release. Paul Farmer, Co-founder of Partners in Health and chair of the Department of Global Health and Social Medicine at Harvard Medical School.


Related COEH Resources

COEH provides a number of resources to improve the safety and health of immigrant communities. These include the UC Davis Migration and Occupational Health Research Center, the UC Davis Exposure Sciences Group, the UC Berkeley Center for Environmental Research and Children’s Health, the UC Davis Center for Agricultural Health and Safety and the Labor Occupational Health Program.

Protecting Vulnerable Workers

Taking the Risk Out of Recycling

Recycling workers are at high risk of injury and illness in California, says Valeria Velazquez, Coordinator of Public Programs at UC Berkeley’s Labor Occupational Health Program. Dirty syringes, asbestos, lead, rat feces, fire arms, and even a grenade are just a few of the nasty surprises in recycling waste that Velazquez became aware of during LOHP’s training campaign designed to improve the safety of recycling workers in Alameda County.

Funded by a federal grant from the Occupational Safety and Health Administration, Suzanne Teran, Velazquez and Leonor Dione from LOHP trained over 130 workers from four recycling facilities in partnership with International Longshore and Warehouse Union (ILWU) Local 6.

“You name it, these workers probably face it,” says Velazquez. Although recycling plants contain a wide range of hazardous equipment and materials, LOHP’s team and Agustin Ramirez, the Affirmative Action Officer, identified their focus to three of the most severe: the inhalation of dust and other harmful particles, the air, ergonomics issues stemming from long periods of standing and sorting recyclable materials on the conveyor belt, and blood borne pathogens from cuts or needle prick injuries.

Materials were developed in Spanish and English, and the courses were presented in Spanish.

For every training, there was an intentional effort to plan for action using the information we imparted,” says Velazquez. For example, at each of the nine sessions, workers said conveyor belt speed was a top safety issue. “If it’s too fast, they can’t see what they’re sorting through and more likely to touch something hazardous,” explains Velazquez. After training with LOHP and ILWU, Velazquez received feedback that workers stepped up their use of the conveyor’s emergency stop button to prevent injury. “Companies have been responsive and have moved immediately to discuss solutions,” added Velazquez.

Their goal is to leverage their training investment with a “train the trainer” program. With funding to continue their training for another year, LOHP and ILWU plan to coach twenty-five employees to become leaders in health and safety, engaging coworkers and participating on committees.

“The training has had lasting effects. Not only did workers gain tools to protect themselves, they learned how to exercise their rights in the workplace,” said Agustin Ramirez, lead organizer of ILWU Local 6.

Health Hazards of Hair Straightening

Formaldehyde levels during hair straightening treatments can exceed federal limits set by the Occupational Health Administration (OSHA) short-term exposure limits and the National Institute of Occupational Safety and Health (NIOSH) recommended ceiling. A study published in the journal *Journal of Occupational and Environmental Hygiene* found that formaldehyde levels that fail to meet federal limits of safety, says Stewart.

“If you were to look at the product we sampled, you would see a concerning label and the Material Safety Data Sheet would indicate formaldehyde as an ingredient. Often consumers are unaware that its use is that most salons and stylists who use the product are not equipped with the necessary resources, such as localized exhaust ventilation, to properly mitigate the exposure to their clients and themselves,” notes Stewart. “It’s not feasible to establish adequate engineering controls. I would emphasize the use of products that have been tested by a third party to have minimal levels of formaldehyde in the solution.”

Formaldehyde, classified as a known human carcinogen by the International Agency for Research on Cancer, can also trigger short-term exposure symptoms. Watery eyes, irritations of the skin and respiratory system are the most common.

Previous studies have also shown that formaldehyde exposure with asthma and reproductive harm, the authors added.

For the paper, scientists simulated the use of hair straightening products containing methylene glycol, a hydrated form of formaldehyde, in a controlled air chamber. Wearing fit-tested air purifying masks, they performed typical hair straightening procedures and rigid manikin. One fluid ounce of product was applied to the hair before it was blow-dried and straightened with a flat-iron.

The study, funded by NIOSH and COEH, recommends the use of hair straightening products containing formaldehyde less than 1 milligram per milliliter to maintain exposure levels within OSHA and NIOSH limits.

Air samples taken during the simulations showed the stylist’s breathing exhaust and formaldehyde was highest during blow-drying, up to 3.1 parts per million (ppm). The second highest exposure, 2.4 ppm, occurred during flat-ironing. OSHA’s short-term exposure limit is 2 ppm while NIOSH’s recommended ceiling limit is 0.1 ppm.

“Although some salons have switched to products labeled as formaldehyde-free, our study suggests a significant number of salon workers and customers may be unknowingly exposed to formaldehyde levels that fail to meet federal limits of safety,” says Stewart.

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A stylist uses a flat-iron to straighten hair.
Because the ATD standard kicked in around the time of pertussis outbreak, I got a chance in my job to see our regulation work in action in July 2009, helped shape Gold's career. "The program at Berkeley couldn't have prepared me better for my career," said Gold. "As an industrial hygiene student in the School of Public Health, she took a course with Bob Cooper. "We were his last class," added Gold. "He was a guy who knew about sewage and water treatment. That course I did a sewage treatment plant inspection I knew was going on because of him." Gold encourages students to think about heat stress when they think about agricultural and construction workers, but there are a lot of other employees who are exposed to heat, for example, workers who prevent and fight wildland fires, and those involved in forestry. "We're putting in a lot of effort into running an effective program to protect workers from heat illness," said Gold. Permissible exposure limits to hazardous substances is another high-priority project in addition to the heat illness prevention campaign. "When most people think about heat stress they think about agricultural and construction workers, but there are a lot of other employees who are exposed to heat, for example, workers who prevent and fight wildland fires, and those involved in forestry. "We're putting in a lot of effort into running an effective program to protect workers from heat illness," said Gold. Permissible exposure limits to hazardous substances is another high-priority project in addition to the heat illness prevention campaign. "When most people think about heat stress they think about agricultural and construction workers, but there are a lot of other employees who are exposed to heat, for example, workers who prevent and fight wildland fires, and those involved in forestry. 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**ANNOUNCEMENTS**

**Schenker Recognized by UC Davis and Harvard**

Marc Schenker, a physician and specialist in occupational, environmental and pulmonary disease, received the alumni award of merit on Nov. 2 from the Harvard School of Public Health. The award is the highest honor the school bestows on graduates with significant careers in public health. It was awarded at the school's centennial celebration.

Schenker also was recognized in August by UC Davis Chancellor Gary S. May, who appointed him a distinguished professor for his research accomplishments, teaching excellence, and service to the university.

Schenker, who joined the UC Davis faculty in 1983, has over 30 years of experience in medicine and public health. He is a professor in the departments of Public Health Sciences and Internal Medicine, where his teaching and research — including more than 150 scientific manuscripts and five books — address occupational and environmental risk factors for respiratory disease, reproductive hazards, and immigrant and farm worker health.

Schenker is director of the Center for Occupational and Environmental Health, Western Center for Agricultural Health and Safety, and the Migration and Health Research Center. He co-directs the Center of Expertise on Migration and Health of the UC Davis Global Health Institute.

Since last year, Schenker has held the position of associate vice provost for outreach and engagement in University Outreach and International Programs.

In addition to a master's degree from Harvard University, Schenker has a bachelor's degree from UC Berkeley and a medical degree from UC San Francisco.

**Rempel Appointed to Italian Commission**

Ira Janowitz joins the Ergonomics Program from Lawrence Berkeley National Laboratory (LBNL) where he has worked since 2007. Previous to his position at LBNL, Janowitz was a senior ergonomics consultant for the University of California’s Ergonomics Program.

The University of California’s Ergonomics Program welcomes back ergonomics consultant Ira Janowitz. He also teaches in the ergonomics courses to COEH graduate students and serves as the ergonomics course director for the COEH Annual Institute for Continuing Education.

Janowitz joins the Ergonomics Program from Lawrence Berkeley National Laboratory (LBNL) where he was the Ergonomics Program Manager since 2007. Previous to his position at LBNL, Janowitz was a senior ergonomics consultant for the University of California’s Ergonomics Program from 1993.

**Janowitz Joins Ergonomics Program**

Marc Schenker

**AWARDS AND HONORS**

**Minkler Honored for Leadership in Community-Based Participatory Research**

COEH faculty Meredith Minkler received the 2013 Tisch Research Prize from the Jonathon M. Tisch College of Citizenship and Public Service at Tufts University. Each year, Tisch College awards the Tisch Research Prize to “recognize a career of academic research on issues related to active citizenship.”

A professor of health and social behavior in the UC Berkeley School of Public Health, “Minkler co-edited the first major and comprehensive studies using community-based participatory research (CBPR) in health and directed a national study of the impact of CBPR on public policy.” The award from Tufts acknowledges the importance of the collaborative CBPR project in San Francisco’s Chinatown community.

In November, Minkler gave a public lecture at Tufts Medical School and was given the award by the University president.

Foley Selected as Fellow of the American Academy of Nursing

Photo from the University California Reception at AAN induction ceremony in Washington DC. Mary Foley, PhD, RN, FAAN in the middle Left: Heather M. Young, PhD, RN, FAAN, Associate Vice Chancellor for Nursing, UC Davis Dean and Professor, Betty Venné Moore School of Nursing at UC Davis Right: DiSaang Hong, PhD, FAAN, Professor and Director of OEHN program, UCSF School of Nursing and COEH

Minker is an associate professor at the University of California School of Nursing and COEH. She uses the collective voice of the state and national nurses associations, especially the American Nurses Association (ANA), to advance change in the three areas: needlestick and sharp injury prevention, quality nursing practice, and patient safety. Her work on injury prevention aligns with her research and policy work to improve patient safety.

**IN THE MEDIA**

**NEW YORK TIMES: Katharine Hammond, professor of Environmental Health Sciences at the UC Berkeley School of Public Health, clarifies the health risks associated with lipstick products containing lead, aluminum, chromium, and manganese in the New York Times.**

Environmental Health Perspectives published the paper by lead author Sa Liu from UC Berkeley. “Concentrations and Potential Health Risks of Metals in Lip Products,” in June 2013.

**KQED RADIO: On KQED’s “Forum with Michael Krasny,” COEH faculty Michael Wilson discusses the implications of the California Safer Consumer Products Regulations, including its effect on consumers and manufacturers. Wilson is an associate director of the Berkeley Center for Green Chemistry.**

To read more IN THE MEDIA stories and view additional links, visit Bridges on-line at: coeberkeley.edubridges.org.

**EPOCH TIMES: A year following the August 2012 Chevron refinery fire in Richmond, California, Michael Wilson details the findings of LOHP’s summary report on public health and the Governor of California’s Interagency Task Force on Refinery Safety in an interview with the EPOCH Times.**

**NBC BAY AREA: Michael Wilson addresses concerns that firefighters in San Jose face increased risks of cancer due to potential occupational and environmental exposures.**

**SAN FRANCISCO CHRONICLE: Megan Schwartzman, associate director of the Berkeley Center for Green Chemistry, comments on California’s new green chemistry law, the Safer Consumer Products Regulations.**

**SAN FRANCISCO CHRONICLE: COEH faculty Brenda Eskenazi and her team are front page news with a detailed story on the Center for the Health Assessment of Mothers and Children of Salinas project, or CHAMACOS, a longitudinal birth cohort study examining chemicals and other factors in the environment and children’s health in Salinas Valley, California. Eskenazi is a professor of Epidemiology in the UC Berkeley School of Public Health and director of the Center for Environmental Research and Children’s Health.**

**HEADLINES & GLOBAL NEWS: Read the news on research from Michael Jerrett and colleagues that showed children who live in “smart growth” neighborhoods get 46 percent more physical activity.**

**KCBS RADIO: A new study by COEH faculty Michael Jerrett and colleagues linking air pollution and premature death from heart disease received coverage on KCBS Radio and BioScience Technology. Jerrett is chair of Environmental Health Sciences in the UC Berkeley School of Public Health.**

**COEH BRIDGES | WINTER 2013-2014**

**2013-2014**
The Northern California Center for Occupational and Environmental Health (COEH), a multidisciplinary program of the University of California at Berkeley, Davis, and San Francisco, promotes health and safety in workplaces and communities by:

Educating health professionals in epidemiology, ergonomics, industrial hygiene, medicine, nursing, toxicology, and related fields to be leaders in occupational and environmental health.

Developing new knowledge through an interdisciplinary research agenda focused on preventing illness and injury.

Responding to the needs of people affected by hazards in their workplaces or communities, with special attention to vulnerable populations.

Through these activities COEH supports federal, state, and local agencies, health and safety professionals, industry, labor, and community-based organizations in their efforts to prevent occupational and environmental disease and injury.

COEH is an Education and Research Center (ERC) of the National Institute for Occupational Safety and Health (NIOSH).