

UNIVERSITY
OF
CALIFORNIA

University of California
Centers of Excellence

ANNUAL REPORT 2017



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ENVIRONMENTAL HEALTH & SAFETY (EHS)

CENTERS OF EXCELLENCE:

Field Research Safety

Safety & Risk Engineering

Safety in the Performance Arts

Center for Laboratory Safety

National Biocontainment Training Program

Chemical Informatics

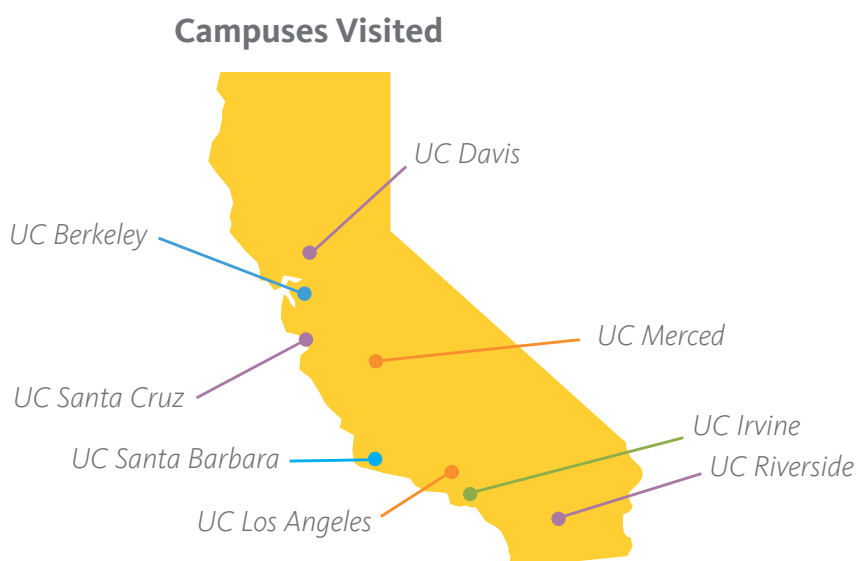
Risk & Safety Training



FIELD RESEARCH SAFETY

- Facilitated a safety discussion at the UC Natural Reserve System (NRS) annual managers' meeting on the following topics:
 - Wildland fire safety
 - First aid kits and training
 - Emergency communication options
 - Code of conduct
 - Sexual harassment reporting
 - Equipment safety and facility maintenance
- Visited the following campuses to facilitate Field Safety Planning workshops, individual meetings and tours:
 - UC Santa Barbara
 - UC Santa Cruz
 - UC Merced
 - UC Riverside
 - UC Irvine
 - UCLA
 - UC Davis
- Initiated coordination with field researchers, field station managers, diving and boating safety officers, risk managers, Occupational and Employee Health Services Directors, EH&S workgroups, research oversight committees, and outdoor education/recreation staff.
- Recorded a field safety training for the systemwide EH&S Professional Education certification.
- Coordinated 10 Wilderness First Aid classes for over 200 UC field researchers and staff.
- Evaluated high-risk tower climbing activity and coordinated fall protection competent person training for designated Natural Reserve System staff. Working on matching funds program to support replacement and upgrades to outdated fall protection equipment.

Metrics



10
Wilderness
First Aid Trainings

Coordinated two-day Tower Climbing and Rescue training at Sagehen Creek Field Station for 10 staff (UC Berkeley, UC Merced, UC Irvine).

200+
Researchers Trained in
Wilderness First Aid

SAFETY & RISK ENGINEERING

- Conducted technical incident investigations and shared lessons learned for multiple explosions or electric shocks at several UC campus labs.
- Worked as a Subject Matter Expert (SME) with the Systemwide Training & Education Workgroup (STEW) to develop the Injury and Illness Prevention Program (IIPP)/Occupational Safety Learning Module content for the EH&S Professional Education certification program.
- Provided consultations on every UC campus and several medical centers.
- Conducted safety audits of UC management systems and developed strategic safety management plans.
- Provided consultation to CSU San Marcos for Electrical Safety, Shop Safety, Energy Isolation, and LOTO.
- Conducted various Safety Management System gap analyses with recommendations for local management’s strategy and action plans for moving safety forward in various operations.
- Worked with Risk & Safety Solutions (RSS) to develop the Procedures app, an in-house version of UC LOTO. Acted as SME for RSS development of “Procedures” tool. Champion and visionary of end-users’ needs for “Procedures” to be a viable / usable tool for EH&S and Researchers. Included migration of UC LOTO app users to “Procedures” for all 9 campuses using the UC LOTO app at the start of the PA period.
- Developed a systemwide model for Safety Programs.

Outreach

- Speaker at the following conferences:
 - Southern California University “Safety Consortium”
 - ASSE Bay Area Chapter meeting
 - UC Risk Summit
 - CSHEMA Regional Conference
 - CSHEMA National Conference

35

Campus Visits

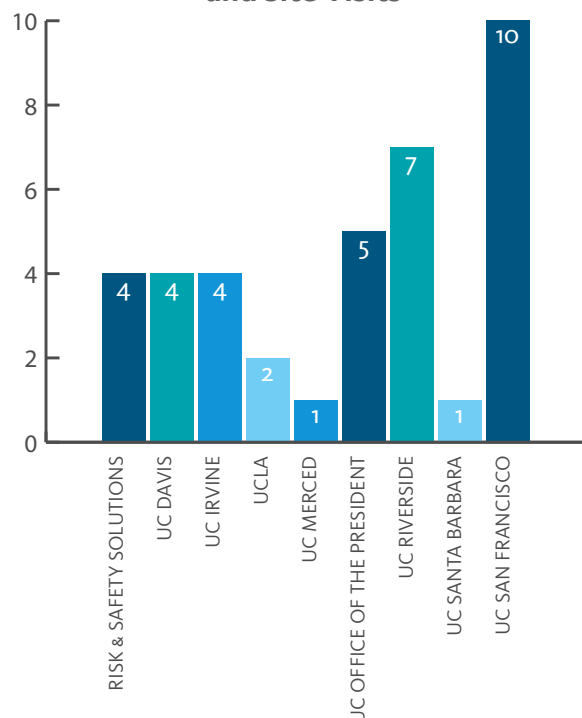
9

Campuses are using LOTO

UC Davis, UC Santa Barbara, UCLA, UC Irvine, UC Berkeley & UC Riverside

Conducted “Electrical Safety in Research” and “Energy Isolation/LOTO” training for Engineering PIs and Students. UC Davis has made this course a requirement for all students and faculty at UC Davis Engineering to attend.

Campus Consultations and Site Visits





SAFETY IN THE PERFORMING ARTS

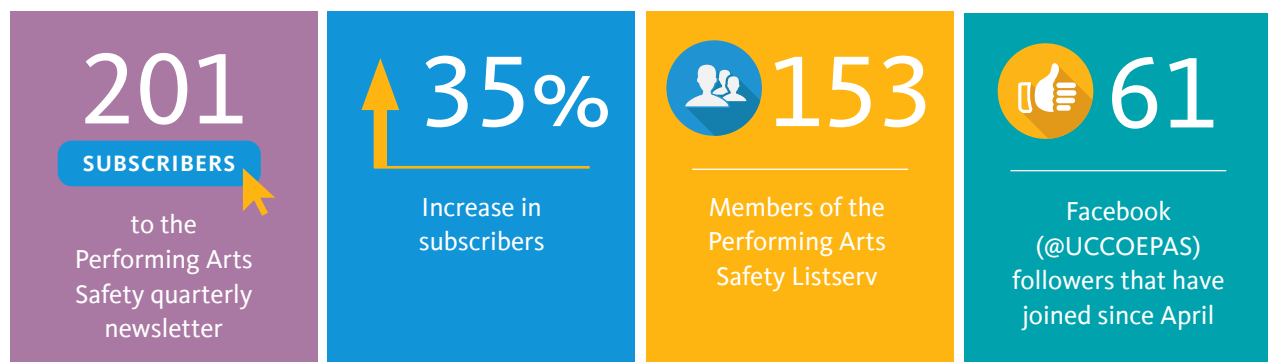
- Worked with numerous colleagues across the UC system to create an online safety training suite specific to performing arts staff, faculty and students. Their intention is to collect input and materials for the Systemwide Training & Education Workgroup (STEW) development.
- Consulted with Safety Skills on content for online theater and art safety classes. The UC Center for Risk & Safety Training will begin reviewing content and options for use of these classes throughout the system.
- Safety audits will be done by using the Inspect and Procedures apps for theater consultation visits.
- In the process of creating standard procedural documents and written programs for tool safety, fall protection, first aid kits, after hours work, etc. for UCSC.
- Increased the listserv subscription for the Safety in the Performing Arts newsletter by 35%.
- Worked with the UC Santa Cruz Arts Events Office to update their manual for house managers and ushers to include safety protocols and developed a documentation system for pre-event safety checks.
- Created a Facebook page for the Safety in the Performing Arts CoE.

Outreach

- Completed audits at UCLA, UC San Diego and UC Irvine, and provided a report.
- Attended USITT (United States Institute of Theater Technology), CSHEMA, Risk Summit, and ASSE (American Society of Safety Engineers Conferences representing the CoE. Presenting and also making vendor connection for products that can improve safety in the arts.

Metrics

- 201 subscribers to the Performing Arts Safety quarterly newsletter. Increased subscribers by 35%.
- 153 members of the Performing Arts Safety Listserv.
- Facebook (@UCCOEPAS) now has 61 followers that have joined since April. Some posts have reached as many as 268 people through sharing of the posts. The ANSI standard of the month feature post is proving very popular.



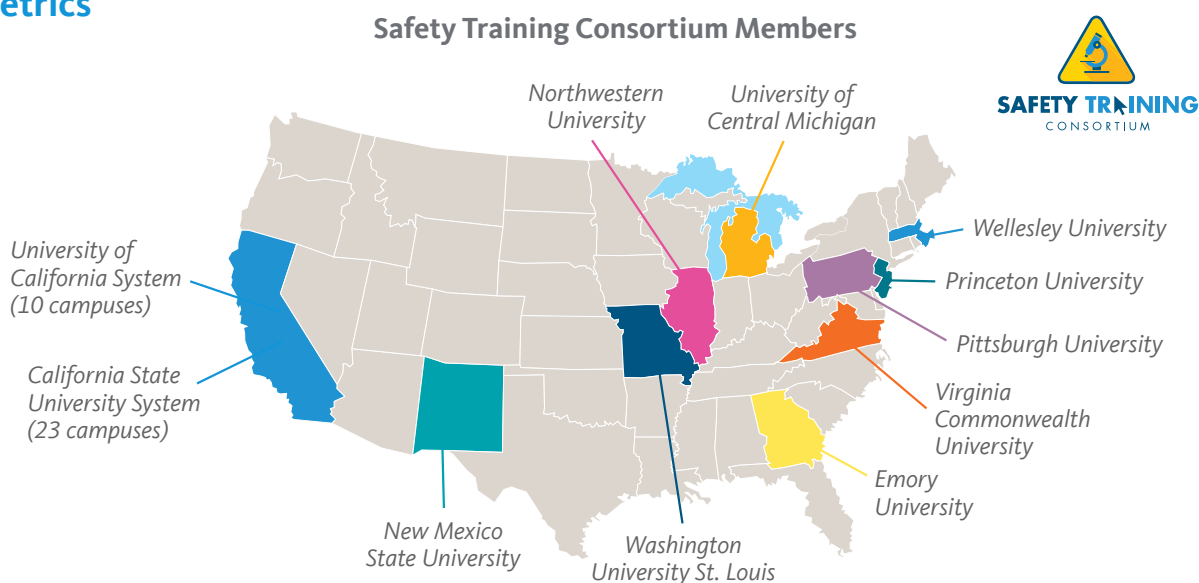
CENTER FOR LABORATORY SAFETY

- Conducted three major research projects (which will continue through the next year):
 - A comparison of safety cultures across multiple UC campuses
 - An analysis of the impact of UCLA's safety program on numbers of laboratory accidents and injuries over time
 - An analysis of isoflurane and laboratory animal allergen exposure in UCLA laboratories
- Performed onsite advising of UC Riverside on improving their culture of laboratory safety.
- Conducted an accident investigation of a chemical spill at California State University, Sacramento.
- UC Center for Laboratory Safety managed and provided subject matter experts for the Safety Training Consortium.
 - Founding member of the Safety Training Consortium.
 - Provided administrative support to the Safety Training Consortium and serve as the UC liason between the STC, our Risk & Safety Training CoE and all 10 campuses.
- The flagship Fundamentals of Laboratory Safety course has been launched, and several other online courses are under development. These courses will be used at all 10 UC campuses, the California State University system, and other member universities across the nation.
 - Courses:
 - Fundamentals of Laboratory Safety: Available
 - Fundamentals of Laboratory Safety (Mandarin): October 2017
 - PI Responsibility: Available
 - Laser Safety: September 2017
 - Radiation Safety: November 2017
 - Hazard Identification and Risk Assessment for Researchers: 2018

Presentations

- 15 presentations and 1 webinar (locations include Austin, Oakland, LA, Santa Cruz, Pasadena, London, Iowa City, San Francisco, Riverside, Seattle, Palm Springs)

Metrics



NATIONAL BIOCONTAINMENT TRAINING PROGRAM

- BSL-3 related training has been provided to UC personnel both at the national training center located at UC Irvine and at four campus locations (UC Berkeley, UC Davis, UC San Francisco and UC Riverside). Campus participants at UC Irvine included:
 - UC Irvine
 - UC Berkeley
 - UC Davis
 - UC San Francisco
 - UC Merced
 - UC Santa Barbara
 - UCLA
 - UC Riverside
 - On-site Trainings conducted:
- Trained 60 laboratory workers, 20 facilities management personnel, and 20 emergency first responders at UC San Francisco
 - BSL-3 biosafety training was conducted on-site at UC Davis for 12 facilities management personnel and 13 researchers.
 - High-containment lab emergency management training was conducted on-site at UC Riverside for 28 first responders and administrative personnel.
 - On-site BSL-3 training was provided for eight animal technicians and 20 facilities management personnel at UC Berkeley.

Metrics

- BSL-3 training provided to 189 UC lab personnel
- Added the following course to the program catalog:
 - ANSI Z9.14 BSL-3 Ventilation Standard for Facility Verification

Trainings conducted at UC Irvine:

Participating Entity	O&M	Researcher	ANSI	Emergency
UC Schools	64	93	12	20
Public Health	2	0	1	
Other Academic Universities	18	24	4	
Government/Military Organizations	2	20	1	
Corporate	0	15	1	

CHEMICAL INFORMATICS

- Collaborated with UC Risk & Safety Solutions on development of a database architecture for the chemical library.
- Developed a data hazard classification methodology in collaboration with identified UC stakeholders.
- Provided Chemical Informatics support and expertise as a member of the UC Chemicals Steering Committee.
- Created a survey to gather background information from the individual campuses as part of supporting a better understanding of the chemical data and business-use needs of EH&S.
- Discussed UCLA's use of Microsoft Access to generate the California Environmental Reporting System (CERS) report, and what data is required from UC Chemicals to facilitate that workflow.
- Provided Business Intelligence reports for pyrophoric materials located in the Chemistry Annex and Chemistry building of UC Davis to help drive building retrofits.
- Provided lists of active lab groups and number of containers to the Steering Committee members to help them better gather user feedback by identifying groups that they were unaware of, along with "At-a-Glance" usage analysis of the Chemicals platform.
- Developed classification workflows for CFC Unstable Reactives, Oxidizers, Water Reactive, Organic Peroxides, Corrosive, Cryogenic liquid, Liquid Petroleum Gas, and Pyrophoric drafted in collaboration with FM hazardous materials specialists.

Metrics



524+

User groups have created an inventory record in UC Chemicals across all UC Campuses

Presentations

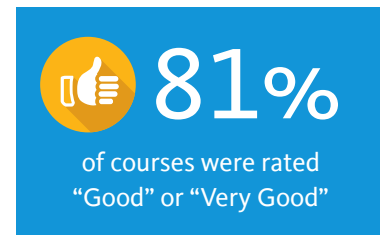
- Provided multiple presentations to the UC Chemicals Steering Committee and the Lab Safety Workgroup in support of understanding data integrity, quality and foundational information being used for the UC Chemicals application.

RISK & SAFETY TRAINING

- Coordinated development of more than 30 training courses and videos, and recorded or supported instructor-led training.
- Increased use of systemwide training by 19%.
- Supported distribution of training to other universities through the UC Center for Laboratory Safety Training Consortium.
- Maintained the website <http://training.ucr.edu/> housing courses, resources and CoE team information.
- Migrated courses to Amazon S3 (instead of Google Drive), secured files (in SharePoint), and converted systemwide courses to Articulate Storyline 2 (instead of Articulate Studio 13).
- Developed monthly reports in coordination with the former Learning Management System (LMS) Center of Excellence on the Implementation Report and course completions.
- Initiated approvals, partnerships, outreach and recordings for the EH&S Professional Development certification presentations

Metrics

- Top 5 most used courses:
 - Laboratory Safety Fundamentals
 - Safe Patient Handling
 - Bloodborne Pathogens
 - Hazard Communication
 - Laboratory Safety Refresher
- Most used SkillSoft course by campus:
 - UC Berkeley - Forklift Operation
 - UC Davis - Personal Protective Equipment
 - UC Irvine - Ladder Safety
 - UCLA - not used
 - UC Merced - Compressed Gas Safety
 - UC Riverside - Respiratory Protection
 - UC San Diego - Bloodborne Pathogens Awareness
 - UC San Francisco - Machine Guarding
 - UC Santa Barbara - Bloodborne Pathogens Awareness
 - UC Santa Cruz - Ladder Safety



HEALTH SYSTEM

CENTERS OF EXCELLENCE:

Safe Patient Handling & Mobility

Workplace Violence Prevention

Event Reporting & Data Management System

SAFE PATIENT HANDLING AND MOBILITY (SPHM)

- Launched the Inspect SPH tool to assist with standardizing metrics for hazard assessment throughout the system. This tool can help to inventory current equipment levels.
- Developed a web form (SmartSheet) for the unit-specific SPH plan required by Cal-OSHA that allows for gathering and analysis of metrics to identify program gaps and high-risk units.
- Developed a RL Solutions automated hazard log for regulatory requirements gap.
- Identified best practices in an effort to formalize a minimal equipment/ space and need requirement for outpatient clinics to satisfy Cal-OSHA 5120 regulation requirements. Best practice is identified as installing a ceiling lift in patientcare areas during remodel or new build. Ideally one ADA designated room with ceiling lift in each clinic site.

Campus Outreach

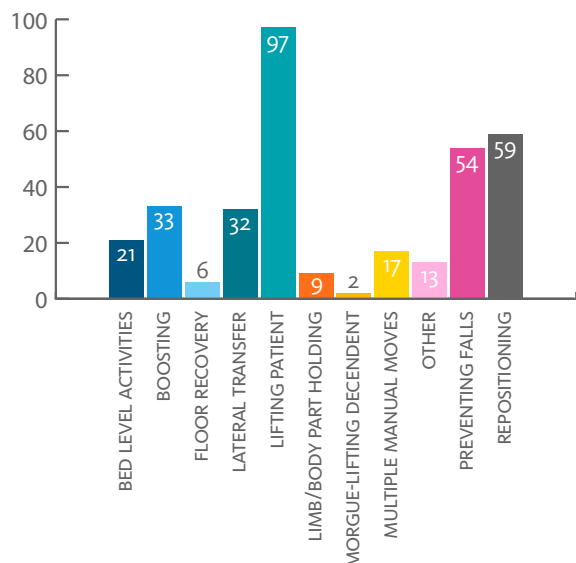
- UC Health Systems SPH monthly phone call to discuss above goals and progress. Webinar training on new SPH INSPECT tool completed.
- Discussion of common needs for training and education: All UCs requesting training videos be created and available on the Learning Management System (LMS) for training on their specific lift equipment and modification of current LMS training module to be site specific. Also requesting a physician training packet via LMS.
- UC Davis: site visit, on-line survey tool for outpatient created and utilized, executive summary report provided on findings, and recommendation of conversion to RL Solutions for SPH Incident Reports.
- UC San Diego: site visit, provision of resource documents for new SPH personnel, discussion of program gaps/ needs.
- UC Irvine: site visit, provision of overview of SPH program gaps and recommended strategy for addressing gaps via report.

Metrics

UC-wide Workers' Comp Claims Costs (SPH ONLY FY2015 – as of run date 10/2016 from iVos)

- 354 Claims resulting in ~\$1,539,600 Direct Claim Costs for Patient Handling (may not be fully developed)
- Industry Standard for Indirect Costs Multiplier:
 - 1.1 OSHA safety Pays Calculator to 5.5 workers' comp calculators
- Total Cost: \$3,233,160-\$10,007,400
 - With the cost of skilled nurses, the largest injured group, likely closer to \$10M in indirect costs

Type of Task During Patient Handling Injury Across all UC Health Systems



WORKPLACE VIOLENCE PREVENTION (WPVP)

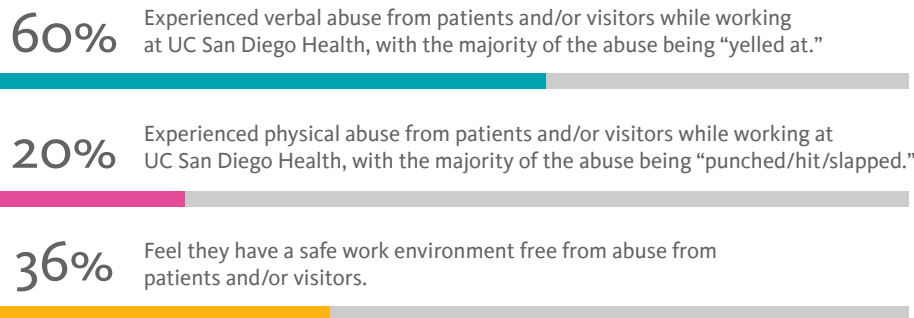
- Established routine conference calls and meetings with stakeholders from each UC Health System.
- Completed Workplace Violence Prevention/Culture of Safety survey at UC San Diego Health System. This survey is now available to all locations.
- Supporting implementation of Workplace Violence Prevention program evaluations at all UC Health Systems to ensure regulatory compliance with:
 - Training
 - Environmental risk assessments
 - Patient-based risk assessments
 - Recordkeeping
 - Reporting
 - Annual plan reviews
- Assisting Health System Workplace Violence Prevention workgroup members and key stakeholders in development of local policies consistent with proposed Cal-OSHA regulations. A UCOP systemwide policy is completed and in the process of being reviewed.
- Provided feedback on Workplace Violence Prevention training to support medical center specific training for each location.
- Environmental Risk Assessments have been completed with collaboration from Health System EHS/Security directors. With assistance of Kristie Elton and the systemwide EHS Leadership team, WPVP queries have been added to the Inspect EOC rounding tool.
- Each UC Health Center is in compliance with keeping a violent incident log effective April 1st, 2017.

Campus Outreach

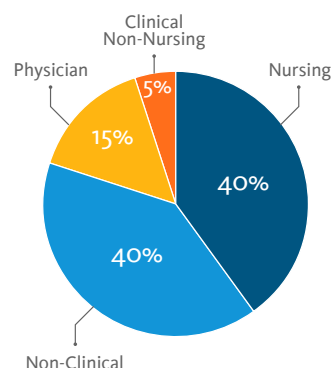
- Conducted an eight-hour, Non-Violent Crisis Intervention workshop at the UC San Diego Outpatient Eating Disorders clinic.

Metrics

833 Responses to “Culture of Safety” survey



Role in the Workplace



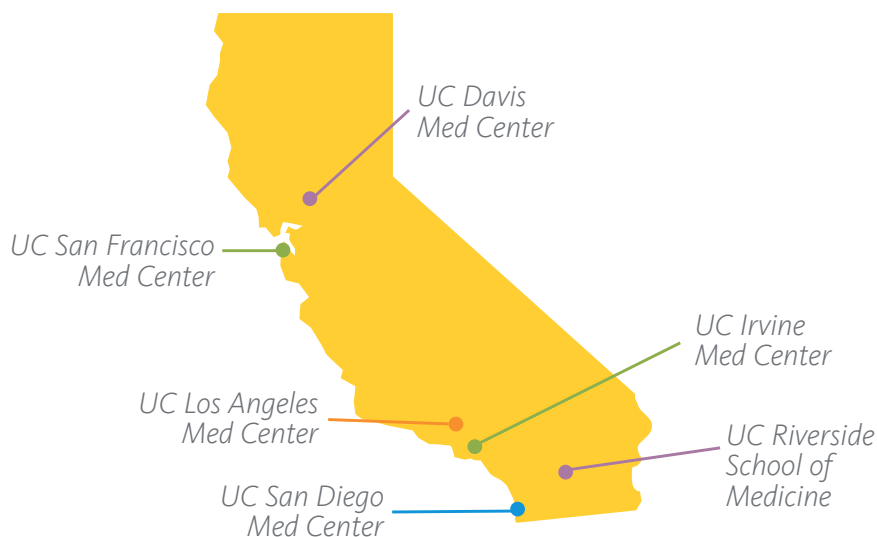


Event Reporting and Data Management System

EVENT REPORTING & DATA MANAGEMENT SYSTEM

- Assisted in launching the Risk Services Data Management System (RDMS) by serving as the subject matter expert and liaison to the Health Systems.
- Developed a systemwide Patient Safety Evaluation Policy (PSES).
- Developed the first patient feedback “Classification of Issues” benchmark reports, presented them to the Feedback Taskforce, and provided them to the group to share with their leadership.
- Created a set of UCOP unit categories that are common among Health Systems for comparison reporting, the four RL campuses have mapped their individual units to these to allow for comparisons of events occurring in same type patient care areas (For example: Inpatient, Emergency, Critical Care). UCLA Health System will map to these common locations in the coming months in order to be included in these comparison reports.
- Initiated collaboration with UCLA’s Patient Safety Analyst to identify and incorporate the event type data points from their system (Quantros) for benchmark comparisons with the other four Health Systems using a common system (RL); UCLA Health System included in Sedgwick quarterly reports for the first time in Oct - December 2016 reports.
- Assisted the team that successfully implemented RL Solutions, a Risk Event Reporting System, at the 10 Campus Student Health and CAPS locations.

UC Medical Centers



Provided information to the five Health Systems regarding Patient Safety Work Product (PSWP) and how to meet requirements of reporting to CHPSO Patient Safety Organization; as of June 2017 four of the five Health Systems are reporting.



Event Reporting and Patient Feedback Meeting Attendees

Produced and facilitated a systemwide 3 day “Event Reporting and Patient Feedback” meeting with 35 attendees from all Health Systems. Participants included Risk, Patient Safety, Quality, Patient Relations, and UCOP representatives, as well as speakers from CHPSO.

Developed an agenda that included presentations from each Health System regarding systems, workflows, regulatory and patient safety data metrics and human factors.

WELLNESS

CENTERS OF EXCELLENCE:

WorkStrong

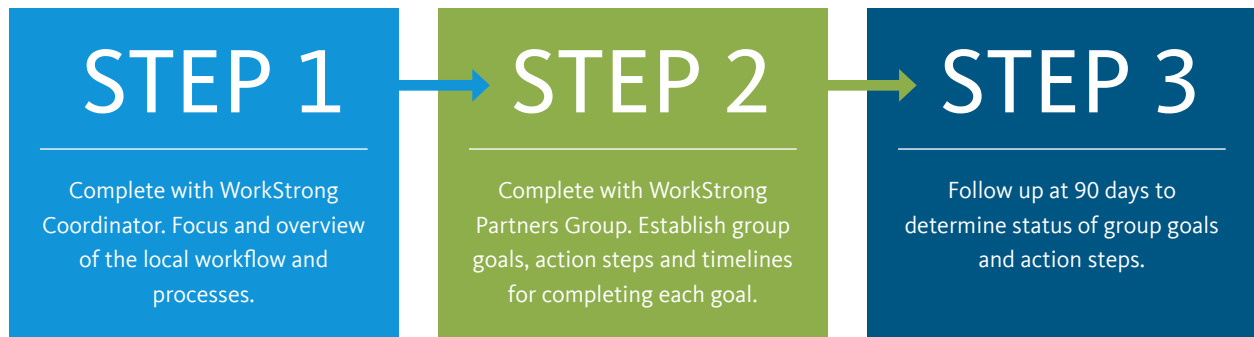
Smoke & Tobacco-Free

WORKSTRONG

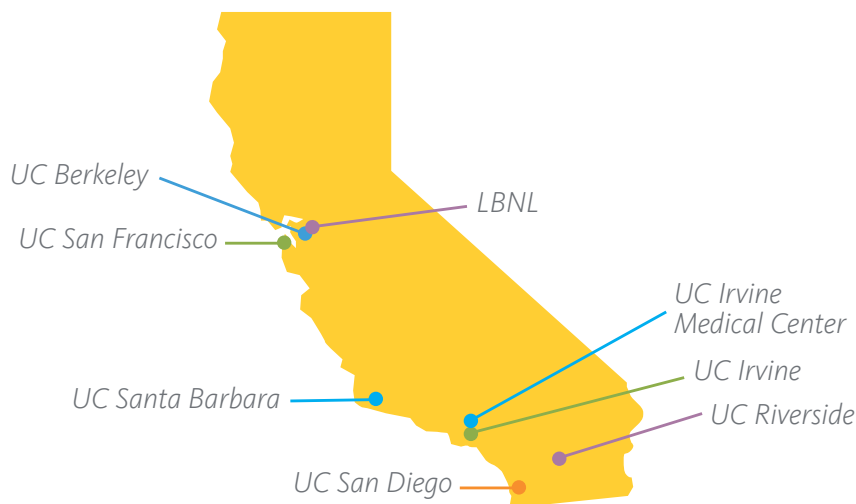
- “Money In Money Out” form created and completed. All funding to date was reconciled and more transparent spending and use of funds is now required.
- Created a new “Funding Rules” document to assist locations with common questions.
- Created a WorkStrong Coordinator handbook for new hires.

Metrics

- Created a 3-part process for maximizing the impact of site visits. Some locations have requested continued follow up even after the 3-part process to ensure all action steps are completed in order to help them grow their program.



Site Visits to Increase Program Enrollment Systemwide



4

New WorkStrong Coordinators trained

↑ 40%

Increase in number of active participants

SMOKE & TOBACCO-FREE

- Held systemwide Task Force meeting with President Napolitano’s Deputy Chief of Staff, Bernie Jones, on May 8th, 2017.
- Coordinated Inaugural Fellowship Program with 4 fellows and secured President Napolitano’s approval for 10 fellows in FY 2017-18.
- Created and finalized a Smoke & Tobacco-Free Dashboard that was distributed and finalized at the end of July 2017.
- Presented revised systemwide policy to the UCOP Policy Advisory Committee (PAC) in April 2017.
- Reviewed each UC location’s policy to ensure compliance with American Non Smokers’ Rights model policy and criteria.
- Held monthly calls with the systemwide Task Force to discuss various policy, prevention, cessation, and compliance issues.
- Collaborated with the California State University system on their effort to go Smoke & Tobacco-Free.
- Created a checklist of opportunities to promote the policy locally and systemwide.

Metrics

- Dashboard

	GOAL AREA / LOCATION														
	UC Berkeley	UC Davis	UCD Health	UC Irvine	UC Irvine Health	UC Los Angeles	UCLA Health	UC Merced	UC Riverside	UCOP/UC Path	UC San Diego	UCSD Health	UC San Francisco	UC Santa Barbara	UC Santa Cruz
POLICY															
100% Smoke/Tobacco Free	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
Includes Marijuana	●	✔	✔	✔	✔	●	●	✔	●	✘	●	●	●	●	✔
100% Tobacco-Free at Work <i>(requires tobacco-free throughout workday including breaks)</i>	✘	✘	✘	✘	✘	✘	✘	✘	✘	✘	✘	✘	✔	✘	✘
Tobacco-Free Hiring	✘	✘	✘	✘	✘	✘	✘	✘	✘	✘	✘	✘	✘	✘	✘
Exemptions - Research and Ceremonial Use only	✔	✔	✔	✔	✘	✔	✔	✔	✔	✘	✔	✔	✔	✔	✔

RISK - GENERAL LIABILITY

CENTER OF EXCELLENCE:

Unmanned Aircraft System Safety



UNMANNED AIRCRAFT SYSTEM SAFETY (DRONES)

- Drafted the systemwide Unmanned Aircraft System (UAS) policy to ensure compliance with Federal regulations; policy now undergoing revision.
- Completed the UC UAS Airworthiness Certification process.
- Developed a UC UAS Risk Matrix for communicating and assessing UAS Risk.
- Provided consultation and expertise with requests for UAS activities consistent with applicable laws, regulations, and policy requirements.
- UC Drones Dashboard was released in April 2017 for administrator access, and a Fleet Management System was launched in November of 2016, which maintains a record of all UAS flights at university locations and by UC affiliates.

Campus Outreach

- Provided a 1.5 hour presentation on Unmanned Aircraft System regulations to all campuses with over 250 attendees.

Metrics

- Made 19 campus visits to address end-users specific issues
- 28 presentations given
- 17 hours of presentation material generated
- Created 12 handouts

