A guide to implementing a SAFETY CULTURE in our universities

APLU/AAU Task Force - Lab Safety Task Force
Taylor Eighmy (UT) and Mark McLellan (USU), co-chairs,
Who does safety in our labs & studios?

UCLA chemistry professor avoids prison time in fatal lab fire case
Who does safety in our labs & studios?
Who does safety in our labs & studios?

Yale Student Killed as Hair Gets Caught in Lathe

By LISA W. FODERARO  APRIL 13, 2011

As a Yale undergraduate majoring in astronomy and physics, Michele Dufault was used to extreme physical environments. She worked on underwater robotic vehicles last summer as a fellow at the Woods Hole Oceanographic Institution in Massachusetts. She also traveled to Houston as part of a team of undergraduates chosen by NASA to perform a plasma physics experiment in reduced gravity.

But it was a rudimentary machine — a lathe in a campus
Who does safety in our labs & studios?
Yale student dies in chemistry lab accident

CBS News, Apr 2011
A Higher Bar for Pathogens, But Adherence Is an Issue

New York Times, May 2010
A Pfizer Whistle-Blower Is Awarded $1.4 Million

New York Times, Apr 2010
U. of C. researcher dies after exposure to plague bacteria

Chicago Tribune, Sept 2009
Texas A&M to pay $1 million fine to end ban on biodefense research

Dallas Morning Star, Feb 2009
2008 UCLA Case

• Rewrote university expectations and concerns regarding campus safety
• Personal Accountability – case law
• 4 charges of criminal liability in staff member’s death
• Plea Bargain arrived at after 4 years in criminal charges
• ~$5M paid out by university in defense costs
• Now --- civil charges ?
Task Force Members

Taylor Eighmy (Co-Chair)
*University of Tennessee, Knoxville*

Mark McLellan (Co-chair)
*Utah State University*

Gene Block (Honorary Chair)
*UCLA*

Kimberly Espy
*University of Arizona*

Mridul Gautam
*University of Nevada, Reno*

Kimberly Jeskie
*Oak Ridge National Laboratory*

Dawn Mason
*Eastman Chemical Company*

Jan Novakofski
*University of Illinois at Urbana-Champaign*

Patty Olinger
*Emory University*

Joanne Polzien
*Michigan Technological University*

Lesley Rigg
*University of Calgary*

Ara Tahmassian
*Harvard University*

Erik Talley
*Cornell University*

William Tolman
*University of Minnesota Twin Cities*

Nancy Wayne
*University of California Los Angeles*

Alice Young
*Texas Tech University*
What We Did

- Reached out to hear from 20 organizations and 25 institutions.
- Synthesized 20 actionable recommendations from Nat’l Academies, ACS, CSB.
- Developed a national implementation strategy with recommendations and a tool box.
APLU Lab Safety Task Force

- Recognize need to address lab accidents
- Need for academic leaders to be proactive
- Concerns about risk management, federal agency action, faculty burden
- Task force established (APLU, AAU, COGR, ACS)
Call to action

We ask that college and university presidents publicize their commitment and expectations within their institutions.
A guide to implementing a SAFETY CULTURE in our universities

Implementation Guide

20 recommendations for a safety culture drawn from top resources

Tools and resources for implementation (+ values, roles, responsibilities resources).


or just google: "APLU" & "Lab Safety"
Implementation Guide

20 recommendations for a safety culture drawn from top resources

Tools and resources for implementation (+ values, roles, responsibilities resources).

A guide to implementing a SAFETY CULTURE in our universities

APLU Council on Research
Task Force on Laboratory Safety
A Tool Box

Cultural adoption in unique to each institution. One size does not fit all.

Tools are expected to evolve.

Focus on cultural change rather than compliance.
Cliff Notes Version:

Recommendation Categories (1-10):
1. President Commits Publicly
2. President designates lead
3. Campus Dialog
4. Safety Policies & Procedures
5. Roles & Responsibilities
6. Safety Communications
7. Safe Culture Development
8. Risk/Hazard Assessment in University
9. Unified Administrative Reporting
10. Empower Student
Recommendation Categories (11-20):
11. EH&S relationship with Faculty
12. First Responders
13. Routine Hazard Analysis in Graduate Education
14. Near Misses
15. Training
16. Safety in Curricula
17. Self Assessment for progress
18. Continuous Improvement Feedback
19. System of Accountability
20. Partnership with outside organizations
1. The president/chancellor renews commitment to improve the culture of safety for all academic research, scholarship, and teaching.

**KEY RESOURCES**

**Safe Science: Promoting a Culture of Safety in Academic Chemical Research (NRC, 2014):**

Recommendation 1. The president and other institutional leaders must actively demonstrate that safety is a core value of the institution and show an ongoing commitment to it.

**Creating Safety Cultures in Academic Institutions (ACS, 2012):**

Recommendation 2. Encourage every leader to become a proponent of safety and safety education, and to demonstrate this care for safety in their actions with other staff members and students.

**Creating a Safety Culture (OSHA, 1989):**

Obtain Top Management “Buy-in.” This is the very first step that needs to be accomplished. Top managers must be on board. If they are not, safety and health will compete against core business issues such as production and profitability, a battle that will almost always be lost. They need to understand the need for change and be willing to support it. Showing the costs to the organization in terms of dollars (direct...
2. The president/chancellor designates a campus lead and leadership team to begin the process. The president/chancellor considers appropriate committees to help implement a culture of safety, including a safety committee of faculty, Environmental Health and Safety (EH&S) officers, and other representatives that can provide formative feedback to researchers, educators, and staff.

KEY RESOURCES

Creating Safety Cultures in Academic Institutions (ACS, 2012)
Recommendation 13. Establish a series of safety councils and safety committees from the highest level of management to the departmental level or lower. Each of these committees reports, in turn, to a committee that is higher in the hierarchy of the institution.

Creating a Safety Culture (OSHA, 1989):
Establish a Steering Committee comprised of management, employees, union (if one exists), and safety staff. The purpose of this group is to facilitate, support, and direct the change processes. This will provide overall guidance and direction and avoid duplication of efforts. To be effective, the group must have the authority to get things done.
Suggested Core Institutional Values

Safety is everyone’s responsibility.

Good science is safe science.

Safety training and education is critical to research and education.

Safety culture is necessary to implement true risk reduction.

Diversity and flexibility of approaches and methods.
Utah State University’s Approach
New Safety Policy

- New committee structure – reporting from base unit to institution
- New cease and desist authority
- New emphasis on personal accountability
- Faculty-conducted hazard assessments
- Safety training for students, employees and visitors
Personal Accountability

- President
- Provost, VPs, Chancellors
- Deans, Executive Directors
- Dept. Heads, Directors
- Faculty/Principal Investigators
- Lab/Supervisor/Foreman
- Employees/Lab Workers
- Students
## Concerns

<table>
<thead>
<tr>
<th>Role</th>
<th>Concern</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deans/Dept. Heads</td>
<td>Cost and time overhead, field Res</td>
</tr>
<tr>
<td>Classified workers</td>
<td>Voice—making a difference</td>
</tr>
<tr>
<td>EHS</td>
<td>Manpower</td>
</tr>
<tr>
<td>PIs</td>
<td>SOP development/Hazard analysis</td>
</tr>
<tr>
<td>VPR</td>
<td>Multi-year effort to move culture</td>
</tr>
</tbody>
</table>
Socializing the Policy

- Many, many meetings and conversations
- College-by-college meetings
- One-on-one meetings with PIs
- Faculty Senate (committee) meetings
- Deans: New committee structures and flexibility
Utah State University’s Approach
Thank you.

Organizations
APLU’s Council on Research (CoR); Association of American Universities (AAU); American Chemical Society (ACS); Council On Governmental Relations (COGR); Council of Graduate Schools (CGS); National Academies of Sciences, Engineering, and Medicine (NASEM); U.S. Chemical Safety and Hazard Investigation Board (UCB); Oak Ridge National Lab; Eastman Chemical Co; Centers for Disease Control and Prevention (CDC); American Biological Safety Association (ABSA); Association for the Accreditation of Human Research Protection Programs (AAHRPP); Campus Safety, Health, and Environmental Management Association (CSHEMA); Association for Assessment and Accreditation of Laboratory Animal Care International (AAALAC); Federation of American Societies for Experimental Biology (FASEB); Federal Demonstration Partnership (FDP); University Risk Management and Insurance Association (URMIA); National Association of College and University Attorneys (NACUA); National Association of College and University Business Officers (NACUBO); National Postdoctoral Association (NPA); Council on Undergraduate Research (CUR); and Council of Colleges of Arts and Sciences (CCAS).

Institutions
Duke University, University of South Florida (FDP), University of Pittsburgh, University of California, University of Nebraska Lincoln, The University of Utah, The University of Texas Health Science, Auburn University, University of Notre Dame, University of Arizona, Texas A&M University System, University of Maryland, University of Tennessee, Knoxville, Utah State University, University of California Los Angeles, University of Arizona, University of Nevada, Reno, University of Illinois at Urbana-Champaign, Emory University, Michigan Technological University, University of Calgary, Harvard University, Cornell University, University of Minnesota Twin Cities, and Texas Tech University