

Mary Beth Koza

The University of North Carolina at Chapel Hill
mbkoza@ehs.unc.edu

**What makes
an
organization?**

Strategy

Information

Processes

People

Structure

Culture

Challenges

Design across	Design across organizational boundaries
Engineer	Engineer processes into strategic capabilities
Develop	Develop individual competencies into a learning organization
Align	Align information technology with business strategy
Integrate	Integrate all the pieces

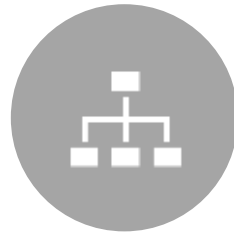
Mission of Higher Education

Create	Create next generation of leaders
Center	Center of Excellence
Provide	Provide access to learning
Foster	Foster success and prosperity of each rising generation
Adapt	Adapt to changing times

College and Universities unique characteristics & challenges



DIVERSITY



HORIZONTAL
DECISION
STRUCTURES



TRADITION OF
FACULTY AUTONOMY



AUTHORITY



RESPONSIBILITY

Innovative Environment

Open-minded

Sense of urgency

Risk taking

Perceptive

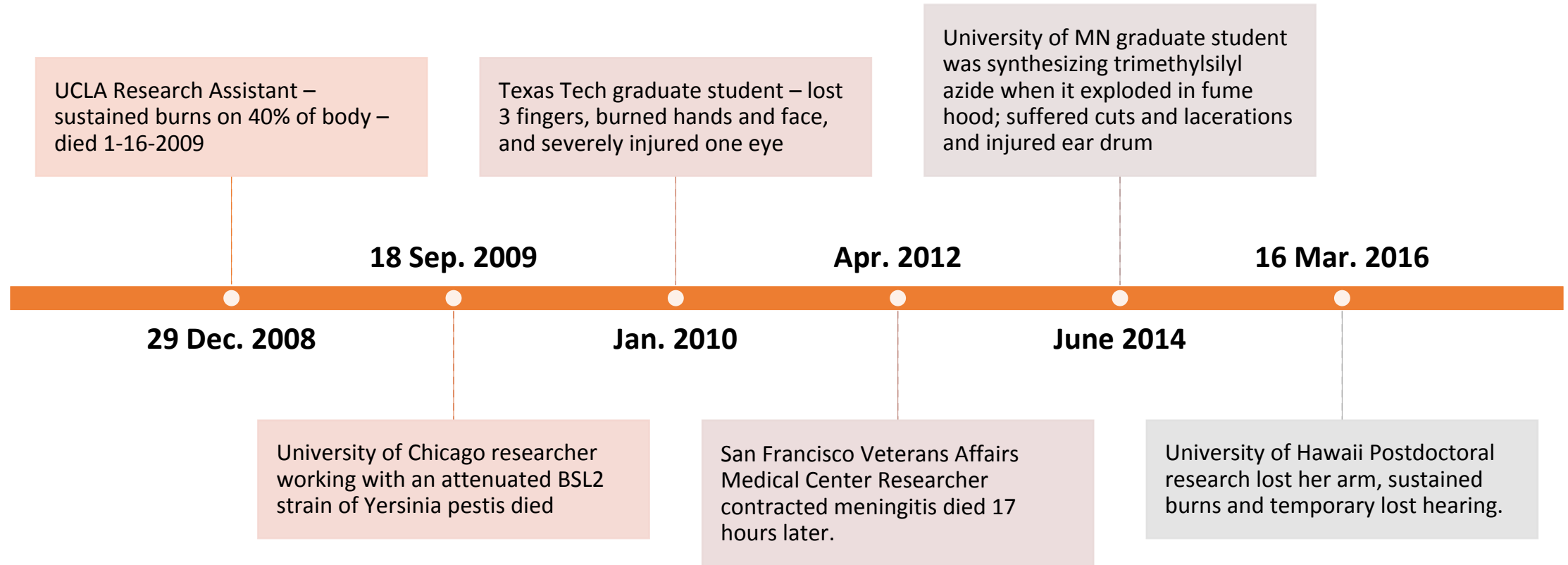
Equal

Nurturing/Safe

Enabling

Variety of thoughts/perspectives

Call to action



Three Cultures types of an Organization

- **Pathological** – power-oriented, information is guarded as personal resource
- **Bureaucratic** – heavily rule-oriented, information not welcome - or ignored
- **Generative** – performance-oriented, information welcomed and directed to the right person Generative culture allows for near-miss reporting, no blame, recognition of hazards

THE NATIONAL ACADEMIES
Advisers to the Nation on Science, Engineering, and Medicine

Generative cultures allows for near-miss reporting, open communication, no blame and best of all proactive recognition of hazards and elimination of those hazards

Culture of Safety

- Core Value of Organization
- Safety is Everyone's responsibility – campus environment must support this and empower the community
- Good Science is Safe Science – Safety is a critical component of the scholarly excellence and responsible conduct of research.
- Safety training and safety education are essential elements of research and education.
- An investment in the future



Why a Positive Safety Culture?

- More beneficial than a compliance only culture
- Core element of a successful organization.
- Leadership's commitment of resources drives safety as an unquestionable core value
- Positive use of resources:
 - Strong policies and expectations
 - Open communications
 - Sufficient incentives
 - Resources budgeting for safety



Organizations succeed or fail as a whole

Safety Culture Equation



- Leadership
- Committee Structure
- Responsible Officials
- Culture
- Information systems

Safety Culture = Leadership + organizational design(budget) + empowerment of the individual

EHS Organization must be a High-Performance Team

- Outperforms external standards
- Performs better than its potential
- Generates energy, excitement and enthusiasm
- Provide technical expertise
- Provide training
- Self audit the processes
- Manage the documentation
- Manage the regulators
- Recognize and reward successes



What is an EHS organization's role and Message to the Organization?

The anticipation, recognition, evaluation and control of the work environment to ensure a safe and healthy workplace and protect the environment for our employees and communities.

- EHS department is a collaborator
- EHS department recognizes and appreciates other unit's contributions to the health and safety program
- EHS department has a management system which guides the work

ENVIRONMENT, HEALTH & SAFETY

- Provides comprehensive environmental, health & safety services to the University community through education, training & consultation.
- Supports maintaining a safe environment through recognizing and controlling health and safety hazards.
- Maintains an EHS Management System.

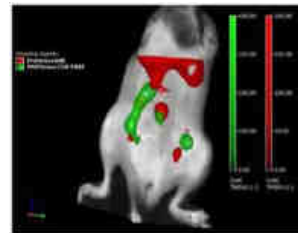
Mission of the Organization

- Providing a safe workplace
- Ensuring a process of compliance
- Minimizing future potential liabilities



EHS Group Functions

- Chemical Safety
- Biological Safety
- Radiation Safety
- Environmental Affairs
- Fire Safety & Emergency Response
- Occupational Hygiene
- Workplace Safety
- University Employee Occupational Health Clinic

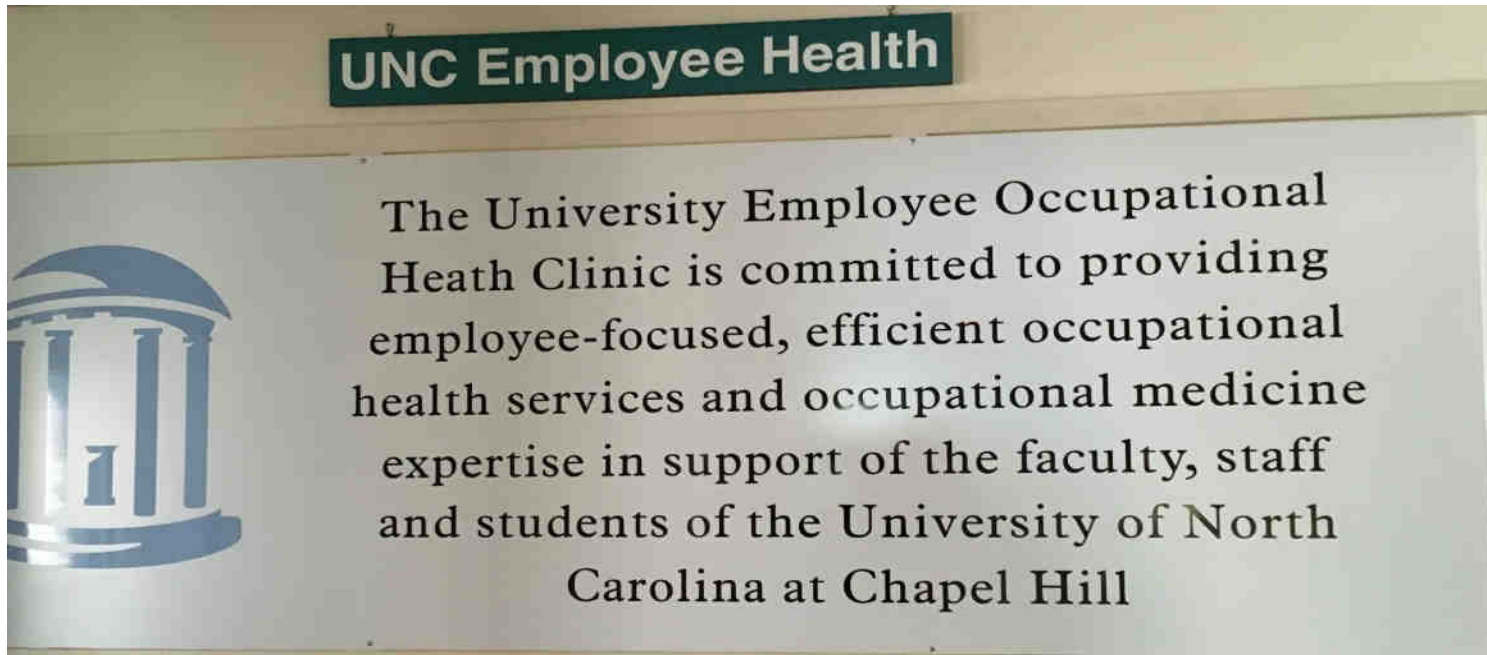


With the breadth and depth of UNC research always expanding, the process of EHS compliance management is ongoing and ever changing, requiring a robust and adaptive management system. In 2019, the department continued its emphasis on an integrated management system for the University's environment, health, and safety compliance programs. This effort was designed to ensure continuous improvements by incorporating a process of ongoing monitoring, reviews, and revisions of procedures and policies through the use of the Plan - Do - Check - Act (PDCA) model. Just as a circle has no end, the Plan - Do - Check - Act cycle is a four-step process model for carrying out change, cycling through each step for continuous improvement.



Also Known as the C Department

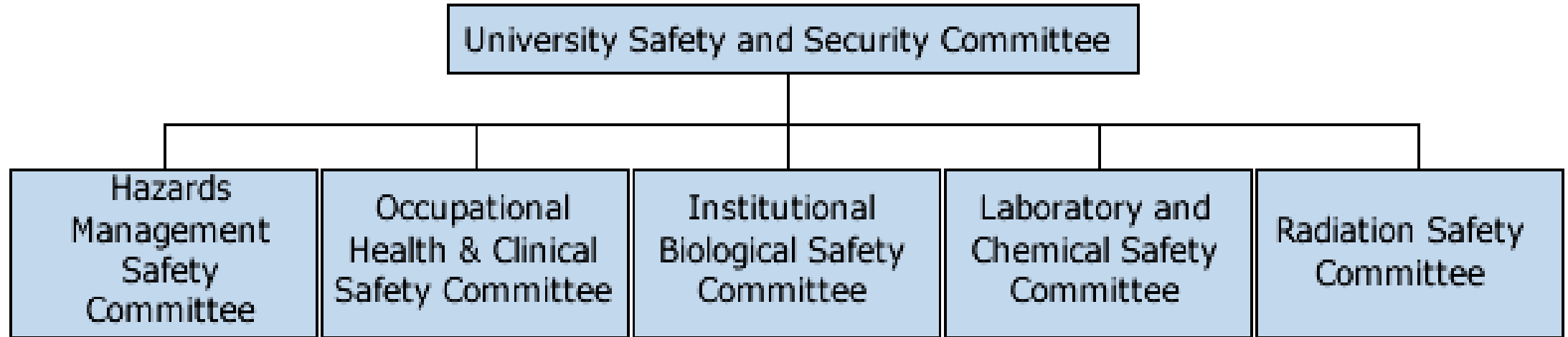
- Customer Service
- Collaboration
- Communication
- Compliance
- Compassionate
- Complaint department



Plan Do Check Act

PDCA	Integrated Management System	UNC EHS Management System
Plan	Objectives Targets	Goals Objectives Work plans Program development
Do	Implementation and Operations	Training Communications Consultation Outreach Lab Safety and Hazard Management Plans Emergency response
Check	Checking	CLIP inspections HMP inspections Monthly reports Annual reports Performance reviews
Act	Corrective and Preventive Actions	Policy & procedure adoption Strategic planning process

University Health and Safety Committees



State regulations require every state agency (including universities) to create health and safety committees to perform workplace inspections, review injury and illness records, make advisory recommendations to the administration, and perform other functions determined by the State Personnel Commission to be necessary for the effective implementation of the State Workplace Requirement Program.

Responsibility For Lab Safety

Employee/Lab Researcher

Principal Investigator

Department and/or School

Environment, Health & Safety

Workplace Safety Committees

- University Safety & Security Committee
 - Institutional Biosafety Committee (IBC)
 - Laboratory & Chemical Safety Committee (LCSC)
 - Radiation Safety Committee (RSC)



PI Responsibilities

Ensure a safe working environment for employees

Compliance with University Chemical Hygiene Plan

- Laboratory Safety Manual
- Laboratory Safety Plan (specific to PI)

Provide training

Provide Personal Protective Equipment (PPE)

Report workplace injuries & near misses



Employee/Lab Researcher Responsibilities

Know	Know safety hazard before you start working with something
Wear	Always wear proper personal protective equipment
Don't work	Don't work alone
Ask	Ask when you don't understand something
Report	Report near misses, accidents and injuries to supervisor



EHS Requirements



Training

All lab workers:

- Lab Safety Orientation (one-time)
- Lab Safety Plan Review

Laboratory specific trainings

- Radiation
- Blood Borne Pathogen
- BSL2
- Formaldehyde
- X-ray
- Laser
- Shipping/Export

Forms

Lab/Rad Worker Registration Form

- Required of all lab workers on campus
- Lab workers register under a PI
- Lab worker identifies what they will be working with which initiates training requirements

Lab Safety Plan

- PI/Lab Director responsible for completion
- Details specific hazards and lab safety practices in lab

Other Forms

- IBC – Institutional Biosafety Committee
 - Schedule G (Recombinant DNA)
 - Schedule H (Use of Transgenic Animals or Plants)
 - Human Gene Transfer Experiments
- IACUC
 - Use of Hazardous Chemicals in Animals
 - Use of Biological Hazards in Animals
 - Use of Radioactive Materials in Animals
- Shipping and Export

UNC-CH SAFETY POLICY

- The University of North Carolina at Chapel Hill (UNC-CH) is committed to providing a safe and healthful environment for all persons associated with the University, including faculty, staff, students, visitors, and members of the Chapel Hill community.
- The University emphasizes an integrated systems approach, as well as safety education and training as the primary means of achieving this goal.
- The Environment, Health and Safety department is primarily responsible for environment, health and safety functions at the University, by developing EHS programs and performing various periodic inspections.
- **Department heads, faculty members, and supervisors are considered directly responsible for maintaining full compliance with State and Federal regulations and University safety policies and procedures.**

Safe Science – Culture of Safety

<http://ehs.unc.edu/lab/safescience/>

The screenshot shows a web browser displaying the UNC EHS website. The browser's address bar shows the URL <http://ehs.unc.edu/lab/safescience/>. The website header includes the UNC logo, the text "FINANCE AND OPERATIONS Environment, Health and Safety", and a search bar. A navigation menu lists various safety topics: ABOUT, NEWS, SAFETY TRAINING, BIOLOGICAL, CHEMICAL, FIRE & EMERGENCY, WORKPLACE SAFETY, ENVIRONMENTAL AFFAIRS, RADIATION, LABORATORY, OCCUPATIONAL & ENVIRONMENTAL HYGIENE, and UNIVERSITY EMPLOYEE OCCUPATIONAL HEALTH CLINIC. The main content area features a breadcrumb trail: Home / Laboratory Safety / Safe Science - Culture of Safety. On the left, a "Laboratory Safety" sidebar lists links such as "Laboratory Fact Sheets", "Hurricane and Tornado Preparedness for UNC Laboratories", "Autoclave Bags/Biohazardous Waste Disposal", "Department of Commerce Shipping Licenses", "Infectious Substances and Other Biomedical Materials Annual Update", "Items Requiring Approval Prior to Purchase or Acquisition", "Good Neighbor Requirements for Shared Open Lab Spaces", and "High School Students and Minors in". The main content area is titled "Safe Science - Culture of Safety" and features a blue header for "A Letter from Interim Chancellor Guskiewicz". Below this is a photo of the interim chancellor and a letter addressed to the Carolina Research Community, discussing the importance of safety in research and the role of EHS experts.

Home / Laboratory Safety / Safe Science - Culture of Safety


Laboratory Safety

- Laboratory Fact Sheets
- Hurricane and Tornado Preparedness for UNC Laboratories
- Autoclave Bags/Biohazardous Waste Disposal
- Department of Commerce Shipping Licenses
- Infectious Substances and Other Biomedical Materials Annual Update
- Items Requiring Approval Prior to Purchase or Acquisition
- Good Neighbor Requirements for Shared Open Lab Spaces
- High School Students and Minors in

Safe Science - Culture of Safety

A Letter from Interim Chancellor Guskiewicz

Dear Carolina Research Community:



As a neuroscientist who has spent thousands of hours in research labs, I am a first-hand witness to the dangers created when substances or equipment, which we encounter every day in our labs, are handled or used incorrectly and unsafely. Health and environmental damage will occur if we overlook the preeminent role safety plays in our daily work as scientists. Since we are a world-renowned, teaching and training institution, our lab policies and procedures must represent the best standards and practices in the world.

Developing and maintaining a culture of safety is a critical component of scholarly excellence and responsible research as well as an important element of our research and teaching mission. At Carolina, we have excellent resources that can assist you with the training and education of your research teams. The Department of Environment, Health and Safety (EHS) is your safety resource ready to assist during every phase of your work. EHS experts are most effective when brought in as a partner during your planning phase so all members of a team will understand hazards, protective measures and controls.





- ABOUT
- NEWS
- SAFETY TRAINING
- BIOLOGICAL
- CHEMICAL
- FIRE & EMERGENCY
- WORKPLACE SAFETY
- ENVIRONMENTAL AFFAIRS
- RADIATION
- LABORATORY
- OCCUPATIONAL & ENVIRONMENTAL HYGIENE
- UNIVERSITY EMPLOYEE OCCUPATIONAL HEALTH CLINIC

Providing a safe and healthy place to teach, learn and serve

Environment, Health and Safety is committed to providing a safe and healthful environment for the Carolina campus and local community through education, training, consultation, recognizing and controlling health and safety hazards, ensuring regulatory compliance and minimizing potential liabilities.

Contact Us

Stay Healthy



EHS Applications and Compliance Portal



Employee Orientation



Safety Manuals and Forms



Self-Study Units



About EHS

Register your
Recombinant DNA Experiments



SAFE SCIENCE



Resources – UNC-CH ehs.unc.edu

The screenshot shows the homepage of the UNC-CH Environmental, Health & Safety (EHS) website. The browser address bar shows <http://ehs.unc.edu/>. The page header includes the UNC logo and the text "UNC ENVIRONMENT, HEALTH & SAFETY". A search bar is located to the right of the logo. Below the header is a navigation menu with the following categories: BIOLOGICAL, CHEMICAL, FIRE & EMERGENCY, WORKPLACE, ENVIRONMENTAL AFFAIRS, RADIATION, LABORATORY, OCCUPATIONAL & ENVIRONMENTAL HYGIENE, and UNIVERSITY EMPLOYEE OCCUPATIONAL HEALTH CLINIC. The main content area features a large image of workers in hard hats and safety glasses. Overlaid on this image are three dark blue boxes with white text. The first box on the left is titled "My Work Environment" and lists: Office, Laboratory, Clinic, Industrial Maintenance & Construction / Support Services, Laboratory Animal Medicine, and Student Support Services. The middle box is titled "Together, making a safe and healthy place to teach, learn and serve" and contains the text: "Committed to providing a safe and healthful environment for all persons associated with the University, including faculty, staff, students, visitors, and members of the Chapel Hill community. Our department supports that effort through education, training, consultation, recognizing and controlling health and safety hazards, ensuring a process of regulatory compliance, and minimizing potential liabilities." The third box on the right is titled "EHS Applications" and lists: Waste Disposal Request, Chemical Inventory, EHS Compliance Portal, Hazards Management Plan, Laboratory Safety Plan, UEHC Appointment System, and Worker Registration Form.

[OWASA Annual Water Quality Report Card](#)

[Zika Virus Preparedness](#)

[Hurricane Preparedness Week](#)

[New APLU Safety Culture Guide](#)



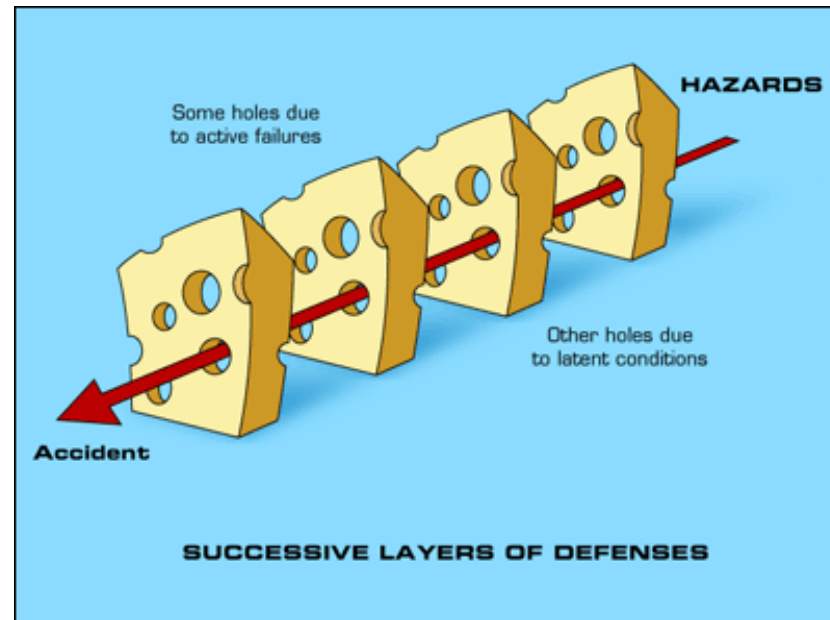
11 Questions to Measure a Safe Workplace

- Do I know what is expected of me to work safely?
- Do I have the materials and protective equipment I need to do my work safely?
- At work, do I have the opportunity to do what I do best every day in a safe environment?
- In the last seven days, have I received recognition or praise for doing a safe job or assignment?
- Does my supervisor, or someone at work, seem to care about me as a person?
- Is there someone at work who encourages my development and safety involvement?
- At work, do I share my safety concerns and do my opinions seem to count?
- Does the mission/purpose of my company make me feel my job is safe and important?
- Are my co-workers committed to doing quality, safe work?
- In the past six months, has someone at work talked to me about my safety performance?
- This last year, have I had opportunities at work to learn and grow in the areas of Safety and Compliance?



Accident Causation

- Reason's Swiss Cheese Model
 - Cheese Layer = Safety layers (system defenses) capable of preventing incident
 - Holes = Gaps within each system where failure could occur



- If failures align then an incident or accident will occur!



I CHOSE TO LOOK THE OTHER WAY

author unknown

I chose to look the other way.
I could have saved a life that day.
But I chose to look the other way.

It wasn't that I didn't care.
I had the time, and I was there.
But, I didn't want to seem a fool.
Or argue over a safety rule.

I knew he'd done the job before.
If I spoke up, he might get sore.
The chances didn't seem that bad.
I'd done the same, and he knew I had.

So I shook my head and walked on by.
He knew the risks as well as I
He took the chance, I closed my eye.
And that act, I let him die.

I could have saved a life that day.
But I chose to look the other way.

Now every time I see his wife.
I'll know, I should have saved his life.
That guilt is something I must bear.
But it isn't something you need to share.

If you see a risk that others take.
That puts their health or life at stake.
The question asked, or thing to say.
Could help them live another day.

If you see a risk and walk away
Then I hope you never have to say
I could have saved a life that day.
But I chose to look the other way.