

# Best Practices in Risk Management for Higher Education

Addressing the “What If” Scenarios



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Addressing the “What If” Scenarios

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**Nanotechnology.**

**Food service areas.**

**Student safety.**

**Chemical research labs.**

**Transportation.**

**Summer camps.**

*These are just a few examples of unique risks that universities\* face.*

*From a risk management perspective, a higher education institution is often compared to a small city. University risk managers face the daunting challenge of identifying and managing the complex risks across their campuses.*

*The good news is that universities have lower loss rates than the industrial sector. However, the cost of claims to higher education institutions—both financially and from a public image standpoint—can be significant. Universities need to protect students, faculty, administration, support workers, contracted workers, the public and their school’s reputation. If a catastrophic loss occurs, the media coverage may affect the school’s reputation, posing a threat to future admissions, endowments, and financial strength.*

*Faced with such a diversity of loss potentials, risk managers may focus on familiar exposures or ones that seem the most tangible. For example, if their background is public events liability, their efforts to control such exposures may be extensive. While risk managers need to continue to address familiar loss drivers, a best-in-class risk management program needs an inclusive approach, focusing on the overall range of potential exposures and “What If” scenarios.*

*“What If” modeling involves identifying and detailing incidents and outcomes that could occur on a campus. The variety of exposures and the risk management plan’s complexity and size demand that universities assemble and involve cross-functional teams, including key university Subject Matter Experts in the modeling process. In many cases, specialists are needed to understand the extent of exposure and the availability and opportunity for control.*

*In “What If” modeling, team participants contribute their knowledge and understanding of operations, control mechanisms and management processes to build accurate “What If(s)”, weigh the risks, determine the controls required, prioritize the need for control and create a comprehensive risk management plan.*

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*\*In this white paper, a “university” refers to a college or a university.*

## Benefits of “What If” Modeling

- Isolates exposures and builds control systems.
- Examines potential exposures, and evaluates the probability of loss, the potential severity of loss, and the degree of control needed to prevent an occurrence.
- Prioritizes exposures and allocates resources effectively.
- Organizes and continuously updates risk management plan.

## High Severity Risk Modeling: Considering Higher Education “What If(s)”

Each university presents a unique mix of worst-case scenario exposures, depending on factors such as educational programs offered, research conducted, number and type of public events held, number of people potentially exposed to risks, and campus size. Several university exposures are outlined below.

## Exposures Associated with Research Laboratories

The possibility of a serious or even catastrophic loss is ever-present in research laboratories, particularly on campuses that include medical teaching schools, technology institutes, and schools that offer scientific research degrees. Schools with leading edge research operations can be involved with biological, chemical and nuclear agents that could present a significant threat to students, faculty and the public if not adequately controlled.

### MICROBIOLOGY AND BIOMEDICAL FACILITIES

While most universities operate basic biology laboratories for teaching, others operate specialized laboratories for research into organisms with varying levels of risk potential. Risk managers may not have a comprehensive understanding of the science within these laboratories. However, they must be aware of the laboratory’s exposures and the effectiveness of applied controls, based upon laboratory classifications.

### NANOTECHNOLOGY

Nanotechnology enables scientists to measure, see, manipulate and manufacture matter between 1-100 nanometers. This is a rapidly growing, emerging area where potential risks may not be well understood, and control processes not yet fully developed.

To address exposures presented by leading edge research, the academic community routinely meets with private and governmental representatives to discuss the risks and develop consensus on how to manage and control these exposures. In the case of nanoscience, a standard addressing safety is being developed and refined through the work of a 30-nation group (Technical Committee 229) that is funded through the International Organization for Standardization (ISO). The American National Standards Institute’s Nanotechnology Standards Panel is coordinating efforts for developing nanotechnology standards within the US, as well as internationally.

Risk managers should be especially diligent in monitoring nanotechnology safety developments, and know and utilize the latest industry standards, research on methodologies, in-house risk assessment and “What If” modeling to best manage this new and quickly evolving area.

### CHEMICAL RESEARCH AND PHYSICAL SCIENCE LABORATORIES

Chemical research and physical science laboratories also present the potential for operational and catastrophic incidents. Chemicals in research laboratories have a multitude of uses and formulaic outcomes. Improper or misuse of chemical agents can easily result in the evacuation of buildings, fire, explosion or potentially fatal health impacts. Similarly, physics laboratories may be using ionizing materials that can vary greatly in their potential health effects. Controlling storage, use and disposal of materials in each of these laboratories is a critical aspect of a university's strategic risk management plan.

Universities must aggressively and consistently implement safety and health practices to protect the health of students, researchers and the environment. To ensure the safety of research programs, the following steps are critical:

- Strong, comprehensive safety protocols must be in place before any new research begins.
- Prior to the initial research, all faculty members, students, contractors and administrators involved in the projects must be trained and capable of applying needed controls.
- Programs must be routinely audited to ensure safety protocols are being applied.
- Safety procedures and policies must be reviewed periodically and updated to reflect changes to the project, materials used, or advances in the technology.
- The risk manager must be confident that research activities within the purview of the university are well controlled and that risk potentials have been minimized.

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### Laboratory Classifications

Ranging from one to four, Bio-laboratory classifications are based on the Risk Group Classification of the lab's materials. Each of the four risk groups demands a specific level of control. Risks range from laboratory work with relatively benign impacts on humans (Risk Group 1) to work involving those organisms likely to cause “serious or lethal human disease for which preventive or therapeutic interventions are not usually available.” The latter, a Risk Group 4 classification, demands very strict control of access, containment and procedures.

Today, the risk manager has the added concern of the laboratory's security. Risk Groups 3 and 4 laboratories may be working with agents that are readily transmittable from human to human, and can cause serious health problems. Concerns over terrorism demand a high level of security in laboratories dealing with toxic agents.

### Facility Exposures: Fire, Collapse and Environmental Health

Physical structures including residence halls, classroom facilities, dining halls, athletic facilities, and administrative offices often comprise a university. In addition, many campuses have alumni buildings, buildings and grounds shops, and residence facilities for university presidents. College buildings vary in age, construction, fire protection and alarm systems. Risk managers must be vigilant in regard to the condition, maintenance and useful lives of all physical structures on their campuses.

Most campus safety managers conduct annual fire inspections that focus heavily on fire exposures. In addition, risk managers must assure that facilities do not present inordinate risk to students and other campus personnel resulting from friable asbestos, lead, mold or other building-related toxins.

High winds present another catastrophic loss potential. For example, an indoor practice facility in Texas collapsed after being struck by high winds from a thunderstorm. This exposure was illustrated again in South Carolina when a stadium wall collapsed during a high school football game.

### Fine Arts Exposures: College Theaters

Backstage at university theaters lurk risks that few would expect, including hazards faced by stage crews, electrical exposures, and risks from set design, materials and lighting. Oftentimes, nobody recognizes and plans for these exposure until after a loss occurs.

*To prevent worst-case scenarios, a risk manager and risk management committee should enact the following:*

- Establish theater safety guidelines and procedures for faculty, staff and students that address all phases of the production.
- Prior to any theater production, assess the type of production and set design.
- Review any requests for the use of special equipment or materials in theater productions.

Involving the risk management department and applying “What If” modeling throughout the production process are necessary to assure that exposures are recognized and controlled. The risk management committee working with the theater department can ensure that proper training is completed and that theater safety procedures and guidelines are enacted to help to protect students, faculty and other workers from backstage risks.

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### Special Equipment Safety in Theater Productions

Set design special equipment and materials, including steps, ladders, traps, or specialty devices such as smoke machines, strobes, and/or gun shot effects, require special attention. Consider the following:

- Wood and decorative materials should be non-combustible or flame resistant whenever possible.
- For theaters with fly space where rigging is used, rigging guidelines need to be established. For example, anything attached to a fly bar must have a safety cable attached as well.
- To increase individual safety while performing potentially hazardous tasks, personal protective equipment may be required backstage for the eyes and face, head, feet, hands or respiratory system.
- Consistent and proper use of personal fall protection is critical for all elevated work, e.g., setting lighting, erecting sets and staffing mezzanine spots.
- Electrical exposures associated with stage lighting and other electrical equipment must be evaluated for its hazards. Those performing wiring or with access to electrical service must be skilled and authorized to perform the assigned tasks. Training is essential for stage crew members working with lighting circuitry, dimmers and instruments.

### An Eye On Security: Violence on Campus

The Virginia Tech tragedy demonstrated how devastating threats to personal safety on campus could be. Thirty-two people, nearly all of them students or professors, died after a student went on a shooting spree. Since then, many universities have boosted their risk control measures to help protect students and employees from violence.

Threats to personal safety from unforeseen exposures on campus may also include hostage situations, bomb threats and/or other incidents in which individuals look to cause harm to themselves or others.

In creating a plan to address these exposures, the university risk control committee needs to consider issues such as the school's proximity to the local population; crime rates and gang activities within the local area; local police response capabilities and on-campus police or public safety capabilities. The risk manager must evaluate all scenarios when considering the level of security or response needed versus available resources.

## CAMPUS SECURITY

The risk manager, risk management committee and campus public safety office professionals must consider the degree of authority to give campus security personnel. If there is a perpetrator on campus, will the officers be authorized to conduct high-speed pursuit or apprehensions, or will they have to call upon local authorities? College administrators and risk managers need to weigh the risks either way. Some urban universities have assumed responsibility for police response “off campus” due to the high density of students within those areas. Administrators must consider new liability exposures assumed in these situations.

## RAPID RESPONSE TEAMS

Some universities have established their own rapid response teams that will respond to hostage situations or violent assaults. Before allocating resources to response teams, universities must be fully aware of the exposures associated with these commitments. University representatives should work closely with local authorities in modeling possible threats and response scenarios. One college recently conducted a mock hostage situation that lasted six hours. Though time-consuming and difficult, these types of drills can help everyone prepare for a worst-case scenario.

## Educating & Informing Students and Staff

### EMERGENCY RESPONSE GUIDES

Along with an Emergency Response Plan that addresses the “What If(s)”, universities should provide and regularly update an “Emergency Response Guide” that prepares students, faculty and the public as to how they should respond to a violent situation. College websites are an ideal way to provide this information.

### CELL PHONE STRATEGIES

Several universities capitalize on student cell phone usage for emergency response. Some services notify the campus community via text messages in emergencies. Other services are activated by students, and provide public safety and police with open communication, a description, personal information about the caller, and a GPS-based location of the individual. These services open the lines of communication between the campus and police services, and can provide life-saving information quickly.

## Verifying Driver Qualifications: Cutting Motor Vehicle Risks

When evaluating exposures, obvious risks like vehicle use can be overlooked. A university’s vehicle operations can range from business use of personal vehicles by campus recruiters to route buses maneuvering around the campus and community, and transportation of sports teams. Emergency services related to public safety and on-campus ambulance services also create vehicular loss potentials from a liability and employee injury standpoint.

The risk manager and transportation manager must remember that university drivers are not only transporting themselves, often they have students in their vehicles. A strong fleet safety policy will help prevent injuries to students resulting from vehicular accidents. Keep in mind that managing transportation exposures involves not only vehicles, but also drivers. Verifying a driver’s qualifications can help ensure that only qualified drivers are operating university vehicles and limit the university’s liability.

## Key Steps in a Driver Risk Management Plan Include:

### PROPERLY SCREEN DRIVERS

Limit vehicle operation to only qualified drivers to decrease the potential for losses and the severity of the liability. If a university vehicle is involved in an accident, the failure of the university to manage their drivers (i.e., screen, train, evaluate) could result in the university's assumption of additional liability for injuries and property damage resulting from the crash.

### SET MINIMUM REQUIREMENTS FOR DRIVER AGE

University-owned vehicles often transport students with faculty members or coaches driving, rather than a professional driver. To prevent "What If" scenarios, check whether the school sets minimum requirements for the age of a driver. The insurance industry considers drivers under age 25 a higher risk, since claims decrease significantly over age 25. Yet many universities allow younger drivers.

**Another important issue:**

*Does the school set guidelines that require drivers to have a valid U.S. driver's license?*

### ESTABLISH DRIVER PERFORMANCE QUALIFICATIONS

Driver performance qualifications should include an evaluation of the driving history of every person who operates a vehicle under the university's auspices. Ensure that their history does not include speeding, drinking while driving or other indicators of reckless or dangerous operation.

*In 2006, a child stopping in a Chinese school's stairwell to tie his shoe spurred a crush that killed six people.*

## Unsafe Crowd Conditions: From Sporting Events to Summer Camps

In crowds, trivial events can have unexpected and tragic consequences, causing stampedes, crushes or riots. In 2006, a child stopping in a Chinese school's stairwell to tie his shoe spurred a crush that killed six people. A few Italian soccer fans in 2007 evoked riotous behavior among thousands of other fans. According to G. Keith Still, a world-leading expert on crowd management, some facilities and stadiums built today are designed to maximize profit, potentially at the expense of safe crowd conditions.

Understanding the social and psychological risks posed by large gatherings—including sports events, concerts, graduation ceremonies and orientation days—is essential for universities that have a high risk for unsafe crowd conditions. Large sporting events may often provoke passionate responses by fans. Universities must consider that if their fans act out or cause property damage or personal injury, the media may capture and publicize the incidents. Such unwanted media attention can impact the school's image.

*Pre-planning events is the best strategy to prevent “What If” scenarios developing from crowd conditions.*

### PRE-PLAN EVENTS

Pre-planning events is the best strategy to prevent “What If” scenarios developing from crowd conditions. Involve the safety and security staff in planning. The plan should include measures for effective and visible security, and practiced and responsible situational response.

### SELECT AN EXPERIENCED SPOKESPERSON

Designate an experienced spokesperson to effectively represent the university to the public if an emergency occurs. As much as possible, an experienced spokesperson will help minimize damage that negative incidents and images can have on a school's reputation. Involve this person immediately should a situation arise, even if it looks like it may be benign. Situations can get out of hand quickly, so engage the right resources right up front.

### PREPARE FOR OFF-SEASON CAMPUS ACTIVITY

While campuses may routinely prepare a risk management plan for the academic year, they often prepare minimally for off-season campus activity. Off-season use can include summer semesters, year-round sports, and educational, sports, and fine arts summer camps.

Camps may involve children and adolescents who temporarily reside on campus. The exposures associated with camp activities (sports, theater productions and science classes) are compounded by these residential stays. College students may serve as camp counselors, and assume control and responsibility for the participants. The risk management plan must address all scenarios for camp operations, including a review of applicable contracts, to assess the university's potential liability. Contingencies must be established for injuries to campers or to staff. Emergency procedures must be understood and practiced for the university to be assured of effective execution if the need arises.

### EVALUATE COMMUNITY USE

Campus athletic facilities, nature trails, and theaters are often offered for community use. Renting out campus facilities may generate extra income and improve relationships with the community; however, from a risk management perspective, the potential cost of these activities needs to be considered, as does the “What If” scenarios. Universities need to have an established a plan to address all incidents and must maintain adequate liability protection if a visitor sustains an injury.

### Preparing for Public Health Issues: H1N1 Outbreak and Other Pandemics

The H1N1 (swine flu) outbreak has been well publicized, and the threat of a pandemic is one of the most important public health issues we face, according to former Secretary of Health and Human Services Mike Leavitt. A flu pandemic is a global outbreak of disease that affects people of all ages, backgrounds and locations, and could cause high numbers of illness and death as well as social disruption. People who have been exposed to the flu virus may be quarantined and as a result, gatherings such as public transportation and schools may be canceled.

*A flu pandemic is a global outbreak of disease that affects people of all ages, backgrounds and locations...*

**It is difficult to fully prepare for a pandemic, however, we are better prepared today than before. For universities, being prepared and responding effectively to a flu pandemic includes executing the following steps:**

- Evaluate the potential impact of a pandemic.
- Establish a coordinator or team with defined roles and responsibilities for dealing with an outbreak.
- Identify key employees, processes, and suppliers that are needed to maintain critical university operations.
- Develop a communication plan for employees, students and the public.
- Evaluate potential community health resources to help your school deal with a pandemic.
- Communicate with local and state public health agencies about any community contributions your school could make during a pandemic.

Prepare for increased absences due to family illness, quarantine (voluntary or mandatory) and community containment measures during a pandemic. Consider what would happen if a significant portion of the faculty were unable to come to work one day or for several consecutive days. A university may need to enact special compensation/sick leave policies or alternative work strategies, e.g., telecommuting, flexible work hours, staggered or reduced shifts. Outline how to provide services to students and staff members remaining on campus. This may require the use of student workers, vendors or contracted laborers.

Risk managers need to evaluate the university's ability to endure a serious threat to student and employee health. By learning about pandemic influenza and defining how various planning assumptions might affect operations, a university can anticipate the strategies needed to mitigate such impacts.

## Achieving a Best Practice Risk Management Program

The worst-case scenarios described above—just a sampling of What If(s)—paint a picture of the risks universities face. “What If” modeling provides the foundation to build a comprehensive risk management plan. To achieve a best-practices risk management status, universities should also enact the following six steps:

**1 INVOLVE UNIVERSITY LEADERSHIP**  
 Executive management must recognize the importance of risk management in keeping their organization safe and financially healthy, and their school’s reputation unblemished. The executive team should understand the risks their organization faces and participate in establishing priorities for the risk management plan.

The executive team’s knowledge of risk, and their understanding of the university’s current capabilities to manage those risks, will help them in making decisions that are directly or indirectly related to loss potentials. In many cases, a Risk Management Executive Steering Committee provides the venue for campus leadership to be involved with establishing priorities, direction and commitments for the risk management process.

**2 ESTABLISH A STRATEGIC RISK PLAN**  
 A strategic plan is critical to building and maintaining an effective risk management system. Events, new exposures and incidents will demand the organization’s time. A detailed strategic plan provides a structure which safety managers can revisit to build and monitor the organization’s overall system. The plan should:

- Identify key priorities for a specific time frame, goals and objectives of risk management projects, responsible parties and target dates for milestones and completion.
- Be a living document that responds to the ever-changing needs and demands of the campus community.

**3 CREATE AN EFFECTIVE RISK MANAGEMENT ARCHITECTURE**  
 Universities are commonly segmented along operational lines: administration, faculty and support staff. Managers and supervisors of operational groups must be responsible for safety, monitoring and coaching employees and students every day on safety responsibilities. Safety and Incident Prevention is one of the few disciplines to cross operational boundaries. It cannot be relegated to the safety or public safety departments; it needs to be integrated into the jobs of each individual on campus.

Every department’s role in risk management needs to be supported by the risk manager and the Environmental Health & Safety (EH&S) Department. EH&S Departments should:

- Develop and implement a risk management plan.
- Champion the plan and its activities.
- Communicate loss trends, patterns and other issues throughout the organization.
- Provide support for the departments through technical assistance, training and other resources, and monitor the effectiveness of existing systems and facilitate changes.
- Ensure that campus managers are aware of compliance guidelines, e.g., EPA or OSHA, Federal or State regulations, provide assistance in compliance, and document compliance activities.

## 4

### ASSESS RISK

Universities need to conduct ongoing assessments of risk and control systems and use audits to evaluate the effectiveness of existing controls.

Risk managers should assess risk on a broad scale, identifying the root causes of existing hazards, correlating those causes to existing controls, and holding departments and employees accountable for effective implementation of controls. Once hazards are identified, the organization must take appropriate action. By evaluating new exposures, schools can design and implement effective controls before incidents occur.

Departmental managers should continually evaluate their effectiveness in preventing loss while EH&S representatives should provide external audits and feedback to managers. Risk managers need to work with other school administrators to assure that the right people are held accountable to implement appropriate controls and that controls are executed in a timely manner.

Ongoing observations of new operations, academic endeavors and facilities will help to assure exposures are controlled and hazards are abated.

## 5

### EMPLOY BENCHMARKING

Loss analysis and benchmarking provide direction to risk assessments and can highlight potential trends or patterns. Evaluating exposures on leading loss areas will lead to solutions. Benchmarking can identify how one school compares to other universities and can aid in predicting future risk issues.

Some critical benchmarking strategies include:

- **Know the Source:** Many organizations claim to provide accurate statistics; however, many are not comprehensive. Insurance carriers and TPAs who specialize in higher education can provide frequency rate statistics and compare a school to their peer group. The Bureau of Labor Statistics can provide benchmarking statistics that investigate industry rates based on work hours.
- **Know the “Denominator”:** The number of cases, e.g., number of claims or loss producing events, is important, however, statistics have much more meaning when placed over a suitable denominator. For example, the number of work injuries is important, however, the number of work injuries per million dollars of payroll reveals much more. Frequency rates allow schools to review their occurrences compared to other universities and monitor the effectiveness of safety and health policies.
- **Know the Trends:** For example, a risk manager may note a four-year decrease in the number of the slip and fall claims at campus sporting events. This sounds like a good result; however, further investigation reveals a steady decline in the number of campus sporting events during these years. The actual result is a claims frequency higher than other universities and an unacceptable loss trend.

Benchmarking is very effective in analyzing employee injuries and motor vehicle-related crashes. Liability and property-related losses are more difficult to benchmark since severity, not frequency, drives the magnitude of losses.

One of the best methods of comparing schools is open discussion among colleagues. Sharing information about trends, emerging hazards, and “What If(s)” is timely and keeps universities on the leading edge of risk management.

## **6** LEVERAGE RISK MANAGEMENT ASSISTANCE

An insurance carrier’s or TPA’s risk control resources can be a significant source of technical and organizational help and information. Most service-minded carriers and TPAs will provide access to technical information, training materials and consulting assistance—this is particularly important to smaller campuses without extensive EH&S resources. By incorporating the resources of its risk management partner, a university can expand its safety capabilities significantly.

### Summary

The risks faced by universities are diverse and the loss potentials enormous. Risk managers must be vigilant in protecting the organization’s assets from both direct and indirect potential losses. By developing and implementing a comprehensive risk management plan, a university will hold a dynamic tool that can serve as a road map for identifying and managing risk exposures.

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### References

1. *Biosafety in Microbiological and Biomedical Laboratories Fifth Edition*; U.S. Department of Health and Human Services. 2007. U. S. Government Printing Office, Washington DC.
2. *Business Plan – ISO TC 229 – Nanotechnologies*. 2007. International Organization for Standardization.
3. ANSI Nanotechnology Standards Panel. American National Standards Institute. Retrieved from: [http://www.ansi.org/standards\\_activities/standards\\_boards\\_panels/nsp/overview.aspx?menuid=3](http://www.ansi.org/standards_activities/standards_boards_panels/nsp/overview.aspx?menuid=3) November 5, 2009.
4. *Negligent Entrustment*. Retrieved from: <http://law.jrank.org/pages/8789/Negligent-Entrustment.html> on November 5, 2009.



### About PMA Companies

PMA Companies, [www.pmacompanies.com](http://www.pmacompanies.com), is a higher education risk management expert. Colleges and universities are some of the most established and successful clients we serve—and we currently bring risk management solutions to more than 200 colleges and universities across the country.

PMA Companies offers customized workers' compensation and property & casualty insurance solutions and unwavering commitment to customer service, with national capabilities designed to serve the distinct needs of sophisticated clients, larger accounts, alternative risk clients, groups, programs and captives, self-insured organizations and mid-size employers.

### About the Authors

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