



**Review of Panel Forum
Conducted at
Columbus Convention Center
On March 4, 2014**

Sponsored and Produced by: Live Safe Foundation in collaboration with Campus Fire Safety COM, and Em2's panel of subject-matter experts.

At the 11th Annual Campus Fire Safety, Security & Risk Management Professional Development Conference & Expo the Live Safe Foundation joined forces with Campus Fire Safety to host and moderate its second 1-hour breakout panel session entitled *"Cooking Safely on Campus— Your Cookbook for Safety"* exploring the topic of education strategies for permanently reducing or eliminating fire incidents in campus-related kitchens and dorm rooms across the country, and especially education regarding the implementation of engineered solutions that prevent cooking fires.

The panel discussion was designed to deliver a multi-perspective understanding of the dramatic and permanent fire solutions now being widely implemented. Well-credentialed panelists from insurance, university, fire-protection, engineered products, and fire safety education discussed the scope of the problem and the impact of kitchen fires and nuisance calls on schools and the surrounding community, the value of fire-safety education, and the importance of education strategies. Each panelist brought something distinct to the session as they shared their unique take on the value and success of education programs and engineered solutions for reducing and eliminating kitchen fires and nuisance calls and their associated costs.

Panelists included:

- **Laird Comber** – VP of Sales, Pioneering Technology
- **Mike Halligan** – Principal, The Halligan Group
- **Brian Hellwig** — Assistant Director, Residential Safety & Security, Kent State University (OH)
- **Andrew Musilli** — Owner, Andrew Musilli Agency, LLC
- **Lt. David B. Sawyer** — Community Relations Officer, Columbus Division of Fire Ohio
- **Steve Smith** — Executive Director, NIFAST

Before an attentive group, panelists shared details of their personal experience with various aspects of community education on cooking safety, including the implementation of engineered solutions that prevent cooking fires. Attendees had the opportunity to understand that communities can take specific steps that are very effective in educating students and residents in cooking fire safety and in ensuring that engineered solutions are implemented, and that such educational programs *do* work and are used already. Interest intensified as panelists shared the strong impact of education in reducing cooking fires.

Technology Manufacturer's Perspective — Laird Comber opened the session by observing that even manufacturers dedicated to preventing cooking fires with engineered solutions recognize that the first (and most important) line of defense in cooking-fire prevention is education, especially when dealing



with students and other at-risk populations. Explaining that the greatest concern of any parent sending their child to College/University—above all else—is their safety and security, Comber pointed out that these demographics are difficult to reach and it’s common for public-education messages to “not get through.”

Knowing the critical value of education in improving cooking safety led Pioneering Technologies to develop a relationship with nonprofit Live Safe, in large part to assist in educational program development. Through the Live Safe collaboration Pioneering has produced and is deploying the “Educational Cookbook for Community Fire Safety,” an instructional cooking-safety program manual designed for communities, fire departments, city managers, and other fire-safety advocates and organizations striving to combat the number one cause of fires in the U.S.—cooking. It contains formulas (recipes), instructions, and tools designed to enable these groups to educate citizens, leaders, and stakeholders about permanent solutions to the cooking-fire problem, and actually implement these solutions.

Explaining the [“Cookbook” program’s availability](#) [link], Mr. Comber noted that it has received accolades and first-hand support from the NFPA, Vision 20/20, US Fire Administration and many authorities and leading organizations on the subject.

First Responder Perspective — Lt. David Sawyer, Community Relations Office Columbus (Ohio) Division of Fire, shared the experience of first responders and addressed the challenges of educating communities in fire safety.

Echoing Mr. Comber, and confirming that education, enforcement, and engineering (the “three E’s”) work together to advance cooking-fire safety, Lt. Sawyer emphasized that his division’s number one problem in educating college students on fire safety is getting them to grasp the gravity and seriousness of the problem (fire); getting them to understand that it *can* happen to them.

Cookbook features:

- Recipes to help reduce cooking fires.
- Educational curriculum to promote behavioral change.
- Engineering solutions to eliminate cooking fires.
- Resources for students, media, decision makers.
- PSA scripts, a web-based article, form letters, and scripts to educate the public.
- Media, and local decision makers in your communities.
- Evaluation tools and techniques.

The educational “cookbook” is for communities, fire departments, city managers, and other fire-safety advocates and organizations striving to combat the number one cause of fires in the U.S.—cooking. It contains formulas (recipes), instructions, and tools designed to enable these groups to educate citizens, leaders, and stakeholders about permanent solutions to the cooking-fire problem, and actually implement these solutions.

Designed to improve public safety by stopping kitchen fires with knowledge, these free tools and resources will educate, equip and empower fire departments and community leaders nationwide as they seek to educate the public and decision makers about how to prevent cooking fires and make homes, campuses and communities safer.

These “cookbook” materials are designed for use within existing educational programs on fire and cooking safety.





For any cooking-fire prevention program to work well, many different solutions exist that can contribute to the objective; different situations require different programs and strategies, and knowing what works and what doesn't is very important.

Columbus Division of Fire now refers to kitchen fire safety public education as “Community Risk Reduction.” What’s the risk for OSU’s campus vicinity? In 2013 Columbus’ 1.5 million people had 306 kitchen fires; 103 of these were on-campus cooking-related fires, and 10 were in OSU’s off-campus area, which includes over 1000 off-campus housing units. We think these are significant numbers.

According to Lt. Sawyer, the biggest thing we can do to stop kitchen fires is getting college-age residents to “recognize the problem of fire, understand what starts/causes kitchen fires, recognize that fire emergencies can happen to them, and recognize when a fire happens *how to react* to that fire.” Education is a fundamental— what these students learn, and how they learn it. Education is the best way to get these kids to “buy in” to fire safety and *change their behavior*.

But for Columbus Division of Fire, the challenge is effectively reaching these target audiences. One limitation is available time and resources for education programs. For example, CDF’s personnel can only educate these target audiences after normal work hours. Scheduling outreach programs after hours requires CDF to pay overtime, which is a budget issue. CDF is always searching for other effective, affordable ways to do educational outreach.

People within the campus areas for the most part haven’t been educated in fire-safety; worse, because of their youth and inexperience they don’t think fires are going to happen to them, and they don’t know how to respond when a fire does happen. They often ignore alarms; they make bad mistakes because they’re not educated. They don’t know how to conduct themselves in an emergency. CDF’s job is to get them to recognize that these emergencies *can* happen to them, and to understand how to *react*. E.g., when you see smoke, you don’t go to look at the fire or see where the fire is, you go to the fire alarm and pull it. R and R (recognition and response) these are the keys we want to teach. We have to educate in order to change their behavior, to enable them recognize and respond.

Enforcement and Engineering (the other E’s) are also important, and support each other, but in off-campus housing, enforcement alone is tough. You can’t “force” someone to stay in a kitchen while they’re cooking, or to install products engineered for fire safety. Enforcement (issuing fines, etc.) doesn’t help stop fires. How are you going to catch them when they’re burning candles—you can’t, because you’re not there. Even if you do catch them, what happens? Disciplining students doesn’t necessarily stop fires. Enforcement alone does little to fundamentally change behavior.



But, you can catch them with education. And when you're educating them, this is the opportunity to simultaneously do inspections, and enforcement. While there on the premises, Fire officials have a great opportunity to really get the kids to understand, to "buy in" by showing them issues in a hands-on, face-to-face manner in their own living space. We need to get students to "buy in" to be aware of how important fire safety is. It's the biggest hurdle in educating this demographic. So, education is the most important of the three E's, it's the starting point.

Columbus Fire is expanding its on-campus "smoke out" program, which has been effective in educating on-campus residents, to take education to students in the off-campus space. One of CDF's priorities is securing invitations from many more off-campus landlords to educate their tenants—CDF wants to get the community of landlords serving university students to buy in to this educational program on a much broader basis (beyond the 20-50 it is doing every fall now). Landlords are increasingly buying in to the program (allowing CDF to educate groups, inspect and enforce at the same time), to get a city-sanctioned fire-safety rating (5-star), which will make parents want to allow their kids to stay in the facility, thus enhancing landlords' ability to market their properties to prospective student tenants. This is how CDF is getting the community to buy in.

Insurance Perspective — Andy Mucilli, an independent insurance agent with 30 years in the business, addressed some of the insurance aspects of improving cooking safety through education and technology. Noting fire's many major costs, especially for insurers, Mucilli focused on the notion that reducing costs is what reduces insurance premiums, and this means reducing fires. Education programs and engineered solutions that prevent kitchen fires save not only lives, but prevent a chain of financial loss. When engineered solutions like heat-limiting burners are deployed it's not just that fewer fires occur. When a fire is prevented from starting, the savings are dramatic. Mucilli's comments are summarized below:

Pertinent Points and Questions from and Insurer's Perspective:

A. **What if I make the decision to do nothing in my apartments, a fire ensues and multiple injuries take place?** If after a kitchen fire loss causing bodily injury occurs, and an apartment owner, or a property manager is deposed and questioned if they had knowledge of a fire suppression/prevention system(s) which could have been offered, and were not, the exposure to a heightened level of financial loss by the plaintiff could be made.

B. **Is my culpability raised because of this? Could someone come back at me for making this decision?** If I decide to do nothing to limit my kitchen fire losses, especially if I know a specific resident may be at risk (i.e. senior, visually impaired, etc.), and a loss ensues, then the plaintiff could focus on my failure to act as a reason for the injury caused to the resident or guest.

C. **Eliminating fires and nuisance alarms does more than limit damages—it protects residents, and reduces liability for the University.** A kitchen fire in an apartment exposes residents to many injury types: smoke inhalation, injury during evacuation, heart attack (exacerbated by the emergency), property damage / loss. Wrongful death claims can escalate to millions of dollars, especially when multiple injuries occur. When fires occur in non-sprinklered facilities, the injury and loss are even greater. Failure to protect residents, even from their own mistakes, not only leads to injury, but the financial impact can far exceed the limits of insurance coverage.





Factors insurance companies consider when determining whether to raise or lower rates are driven by loss ratios and actuaries; insurers not only focus on fire-related cost reductions, but staying in business, keeping shareholders happy, and maintaining certain profitability levels.

Insurers can provide financial incentives (rewards in the form of lower policy premiums) to their insured for being “educated” on the subject of cooking-fire safety, and taking other steps like implementing cooking-fire-safety products. From the insurance industry’s perspective, more education on, and more technology for, cooking-fire safety translates into lower fires losses. So education should be rewarded with lower rates.

But there’s a hitch: insurers need reliable evidence that education programs and implementation of fire-safety technology are actually delivering results on the ground—i.e., fewer fires. Insurance companies want to see the results (the statistics) before they’ll give premium credits/incentives/discounts for cooking-fire safety training or the presence of engineered solutions in insured properties.

Bottom line is that for a community, a university, or property owners to reduce their fire-insurance costs, they’ll have to demonstrate that certain practices and policies (like cooking-fire education and implementing engineered solutions) actually reduce fires and fire losses. So, beyond actually reducing fires through education and technology, those undertaking these proactive programs must focus equally on *tracking, measuring and reporting* their impact with veracity (i.e., a high degree of reliability). (Note: the NIFAST fire-safety education program, the Pioneering Tech engineered products, and the “Educational Cookbook for Community Fire Safety” program all provide the opportunity to document results.)

The Lesson — Fire-insurance buyers must do two things:

1. Track education and technology program results over time.
2. Ask for the discount by communicating with insurers. Ask again; ask a third time.

It’s incumbent upon communities and universities and property owners to make sure their insurance providers know about their cooking-fire prevention steps (actions, programs) and the results attained. Insurance companies will look at your data if you can demonstrate its veracity. The evidence that education and tech solutions work must be clear, well documented, and properly reported.

The more communities / universities educate about, and implement technology for, cooking safety, and track the results of this education and implementation over time, they better positioned they are to





lobby the insurance industry for rate reductions based on demonstrated results. As we do this, we can lower all cooking-fire-related costs—including the cost of fire-loss insurance.

As such documented results/outcomes are reported by many parties, the evidence builds and rates start going down; this in turn leads larger numbers to embrace proven cooking-fire-safety education programs and technology solutions. Ultimately these events lead to changes in public policy as well.

In closing, Musilli pointed out that, from the insurer's perspective, implementing cooking-fire-safety education programs and technology has important and immediate positive results, even without a policy premium discount. Why? Education on cooking-fire safety and implementation of engineered solutions reduce exposure to claims of malfeasance or negligence—they reduce the prospect of liability for doing nothing! If communities, universities, property owners, take the responsibility and affirmative steps to educate residents and implement solid technologies like Safe-T-element and Safe-T Sensor, these proactive actions are a positive effort to make people fire safe when cooking, and reduce the prospect of liability for malfeasance. According to Musilli, there are adverse financial consequences to doing nothing when it comes to fire safety. Preventing fires through education and engineered solutions also prevents escalating wrongful death and injury claims.

University Perspective — Kent State University (Ohio) showcased its kitchen-fire strategies, which include engineered solutions that are reducing and eliminating both electric stove and microwave fires. Brian Hellwig, KSU's Assistant Director of Residential Safety and Security, walked attendees through KSU's experience in implementing both Pioneering Technologies' Safe-T-sensor® for microwave ovens (sensor power control technology—SPCT) and the Safe-T-element® or (High end heat limiting

High-end Heat Limiting Technology (HEHLT):

HEHLT for electric coiled cooking devices is being made mandatory and/or law in jurisdictions throughout North America.

Stovetop cooking operations can quickly reach temperatures that greatly exceed the auto-ignition temperature for cooking oils and common household materials. These high temperatures are not necessary for safe, efficient and effective cooking.

HEHLT consists of a device that is hard wired (tamper proof) into electric coil ranges that limits the high-end cooking temperature to help prevent auto-ignition of common cooking & household materials.

Numerous state and provincial fire chief and fire marshal associations have recently passed Resolutions supporting **HEHLT**.

Some underwriters look for industry studies on technologies before they offer rate reductions. The Consumer Products Safety commission has now released a study verifying that HEHLT is a commercially viable method to reduce fires. There are now a number of other independent studies available that reinforce (HEHLT) as a viable prevention technology. Along with the CPSC, these studies include NFPA, Vision 20/20 and the International Fire Chiefs Association.

The **Safe-T-element®** cooking system for electric-coiled ranges is engineered to help prevent cooking fires & save energy by delivering high-end heat limiting technology. The **Safe-T-sensor®** is a retrofit sensor powered technology (SPCT) developed for microwave ovens. It works with a sensor that magnetically attaches above the vent and shuts off at the first sign of smoke.



technology) HEHLT, a device that automatically prevents burner temperatures from exceeding safe limits and shuts them off.

KSU operates 25 residence halls on KSU's campus and four apt. buildings, housing about 6,300 students on campus, most of whom are first- and second-year students because of a 2-year on-campus living requirement. These residence facilities have a related high rate of turnover. With 14 stoves and 33 microwaves in campus housing common areas, and micro-fridges provided in 21 of the 25 residence halls, students cooking make safety administrators nervous.

In academic year 2012-2013 KSU experienced 150 fire alarms in residence halls, triggered primarily by burnt food and popcorn in microwaves. To reduce the risks associated with student cooking, in 2013 KSU installed the Safe-T-element® on its 14 residence hall stoves and Safe-T-Sensors® on the 33 common area microwaves. In addition, KSU installed 250 Safe-T-Sensors® in the two residence halls with the highest number false microwave related fire alarms (12 alarms combined during 2012-2013).

As a result of these installations, KSU has reduced nuisance alarms and fire department runs to campus in a very positive way. In the two residence halls with Safe-T-Sensors® only one false alarm has occurred in 2013 (and this was due to a student's tampering with the device). Mr. Hellwig concluded that KSU's deployment of the Safe-T-Sensor® on microwave ovens on its campus has been a fabulous success on all levels, and he strongly encouraged all colleges and universities to adopt similar engineered solutions campus wide.

Hellwig explained that the cost of these devices was a great investment given the results, that his department intended to implement the program campus wide, and that doing so was feasible financially on phased-in basis over time. He also noted that KSU's implementation program also required the training of students and janitorial staff in the use and maintenance of the Safe-T-element® devices.

Mr. Hellwig reported that the process succeeded in generating intense awareness of the engineered solutions and fire safety, and demonstrated the effectiveness of such devices. In KSU's experience since the devices were installed cooking fires have been reduced to zero, as have fire department false alarm runs.

As a result of their successful experiences with these technologies KSU plans to continue efforts to acquire and install such devices and ongoing education of new students stressing the importance of using these devices and fire-safety awareness. They also plan to make the devices available through campus stores.





In a comment related to KSU's experience with the Safe-T-sensor® and Safe-T-element® Laird Comber of Pioneering stated that the “quantitative data on before and after result” for their technology installations is very similar among the 100+ universities that have installed either Safe-T-elements or Safe-T-sensors.

Fire-Safety Educator Perspective — Steve Smith, of NIFAST (National Institute of Fire and Safety Training), an organization dedicated to enabling students to be fire safe through online fire-safety education, pointed out that educating student populations is essential to reducing cooking fires; but, he said, it goes beyond education to verification through testing as well. The point is to ensure not only exposure to the material presented (through an easily accessed online platform), but comprehension too.

While the NIFAST program is excellent on core fire-safety substance, including cooking, another key feature is that it permits universities to customize the content to address fire-safety issues unique or pertinent to particular buildings or locations or policies—it allows universities place their specific messages within the program. Customizing the educational tool is a priority because it renders the material specific to the university living environment. This “hands on,” relevant, and relatable material aids comprehension.

An important aspect of the NIFAST program is its certification of students who complete and pass the fire-safety online course and test. The object of certification isn't to make students feel good (although that helps too); rather, it's a credential demonstrating students' proficiency in fire-safety matters. Moreover, compiled test results for student bodies provide campus and community officials with detailed and highly useful data about fire-safety preparation levels, and areas of strength and weakness. This is relevant to campus administrators and off-campus landlords considering who they will permit as tenants in their properties and how to best govern different student groups on the subject of fire-safety readiness.

**EM2 Panel Discussion
Participating and Contributing Fire
Safety Expert Panelists**

Mike Halligan

mikeh@halligangroup.org

The Halligan Group

Andrew Musilli

andy.1@musilli.biz

Andrew Musilli Agency, LLC

Laird Comber

lcomber@pioneeringtech.com

Pioneering Technologies, Inc.

Brian Hellwig

bhellwig@kent.edu

Kent State University, Ohio

Lt. David Sawyer

sawyerd@columbus.gov

Columbus Division of Fire, Ohio

Steve Smith

ssmith@nifast.org

NIFAST

EM2 Panel Moderators:

David Speaker

speaker@probizwriters.com

Probizwriters, LLC

Jill Marcinick

jill@live-safe.org

Live Safe Foundation





For universities, access to and ability to use the data about which students pass the NIFAST test and which don't, and which subject areas students are strong in, and which they, as a group, need work in, permits the university to improve subsequent messaging about and training in certain fire-safety topics.

The data gives the university a real handle on how well their student bodies know fire safety, and what their risk profile is as a whole.

Fire-Safety Consultant Perspective — Mike Halligan, of the Halligan Group, stressed that every community throughout the country is experiencing serious issues concerning cooking-fire safety. The statistics bear this out. Mr. Halligan shared a number of key cooking-fire-related statistics to illustrate the gravity of the cooking-fire problem:

- Cooking equipment was involved in 31% of 118,700 reported fires in 2003 (it is estimated that only 1 in 10 are reported).
- By 2006 Cooking equipment as a percentage of overall home fires increased to 41% of reported fires (154,700 fires).
- The number one cause of fires is unattended cooking. Far more cooking fires are caused by human error than equipment malfunction.
- Electric ranges have a higher risk of fires than gas by over 3 to 1.
- Startlingly the OFM found that 43.4% of all stovetop fires occur in multi-unit residences and 63.2% of these stovetop fires are in subsidized housing units.
- Electric coiled ranges are the least expensive and as a result are in the homes of those who are most vulnerable to fire.
- Structure fires in dormitories, fraternities, sororities and barracks: 81% of reported structure fires involved cooking equipment and 78% of fires were reported as contained or confined to cooking equipment according to the NFPA.
- The number of reported fires in campus housing increased 34% from 3,200 in 1980 to 4,290 in 2006. In comparison, structure fires of all types in the US declined 51% during the same period.
- On average 3,800 campus housing fires occur each year, resulting in 5 deaths, 50 injuries and \$26 million in property loss annually.





- Cooking caused: 42 percent reported home fires, 15 percent home fire deaths, 37 percent home fire injuries.
- There are 155,400 reported cooking related fires each year, 410 deaths, 5,310 injuries and \$756M in direct property damage.
- The Consumer Product Safety Commission adds that there are 4.7 million unreported cooking fires annually and \$7 billion in additional indirect costs annually.

The key to overcoming the problem, according to Mr. Halligan, is to ascertain which combination of the three E's (education, engineering, and enforcement) will work most effectively to reduce cooking fires in a particular community. There are solutions that will work for any particular area and all community leaders should reach out to others with experience in implementing solutions for help, including seminars on developing public fire-safety technology and education solutions.

Conclusion — Through the expertise of the six panelists, and several pointed questions from the audience, all present were provided with sufficient insight to walk away thinking “how can I ensure that my community is designing and implementing effective cooking-fire-safety education programs that include community buy-in, engineered solutions, and tracked, reportable results?”

Live Safe believes that the panelists' knowledge, interests, experience, and perspective brought special value to the session topic and appreciates their participation in expanding the base of fire-safety knowledge.

Jill Marcinick & David Speaker

Moderators– Em2 Roundtable Exchange 2014

About the Live Safe Foundation: The Live Safe Foundation is a non-profit organization (501c3) based in Dublin OH devoted to making fire-and-life-safety education, awareness initiatives, and life-saving tools available on a broad basis to communities, campuses, and institutions. Its objective is to reduce fire fatalities and fire losses; its mission is to enable individuals, through preparation and training, to improve their ability to avoid and survive fires. For more information, visit www.live-safe.org.

Details about some of today's engineered fire solutions and the “Educational Cookbook for Community Fire Safety” are available at *Pioneering Technology Corporation*, Laird Comber, lcomber@pioneeringtech.com.

