One thing that is unique about occupational slang is that a very short expression stands for a lot more than the words express. For example, I have heard the acronym CHAOS used in the fire service. Reportedly it stands for Chief Has Arrived On Scene. The image that acronym conjures up in my mind says a lot about command and control techniques and/or the absence of same by the white hats.

I have also heard of the term called “chiefing around” or “chiefing off”. Those terms have often been applied to those fire chiefs who disappear from the office on a frequent basis. More often than not, this activity involves visiting other fire chiefs, spending time on golf courses and/or in cocktail lounges lamenting the problems associated with managing fire departments.

But one of the ones new expressions that I just heard recently gave me a little bit of concern. My reaction was to slow down and check it out. The event involved an individual who was having a tough time dealing with a decision making process in his community. One of his chief officers stated, while expressing frustration at the situation that he expected his superior to take action and soon. His comment was; “it is time to “chief up””. Obviously this is an extension of the phrase “man up” which literally speaking means stand up for what you believe. Or for the gender correct – woman up.

As I engaged in the discussion with the parties involved it became very clear that the fire chief’s stress was associated with the fact that no matter what decision he made, it was not likely to be popular within his organization. The staff chief was equally frustrated in that the lack of a decision was resulting in huge morale problems in the organization. That scenario is not exactly a new phenomenon. Decision dilemmas have been going on practically since the organization of the first organized fire departments.
Being the chief is not supposed to be a popularity contest. Granted, in many cases, especially in the early days of the volunteer fire service making unpopular decisions often resulted in a chief not being elected the next time.

In a more modern and contemporary sense, the chief making an unpopular decision can often result in an extremely negative reaction by the labor force. Therefore, the discussion of what it means to “chief up” is a lot more important than the phrase might apply.

In another conversation, with another chief officer from a major fire department, we got into a discussion about the criticism being lodged against the fire chief for arguing against specific budget cuts that were on the horizon. In that particular case, the city manager had openly stated “that there is no leadership in the fire service”, meaning that the fire chief was resisting the change and was perceived as a weak department head. The chief felt vulnerable.

It may also be true that trying to be popular with our bosses is not where it is at either. This opens up a real dilemma with a lot of chief officers. In the context of contemporary discussions of what constitutes leadership conflict like this creates an ambiguous an almost hysterically illogical set of expectations to a person being a fire chief when faced with tough decisions. In easy going economic times, it is not hard to be the chief and stay popular, but when the going gets rough the demands upon the chief becomes a proverbial double edged sword. Anyone can sail in calm waters. Takes a sailor to handle rough seas.

In all of the schools, in all of the classrooms, and in all of the training environments of the fire service where does anybody talk about this phenomenon? It gets talked about in an informal fashion a lot. But seldom does the topic of personal integrity and inner strength enter into the formula of carrying out your duties as a fire chief. But, that is literally what is meant by chiefing up.

Decision making during tough times is not always about popularity. It is about principle. And, the fire chief must be prepared to stand on those principles regardless of what the consequences are from above or below. I am not suggesting that by this remark that you go out to antagonize groups, but a reality is that any given decision is liable to result in criticism from either your superior or your subordinate. Recognize it. Accept it. And then move on.

If you have lived through your entire career without having a real serious conflict in making this kind of decision, then you are a fortunate person indeed. If you are looking down the path and seeing decisions of this nature facing you in the near future you might be well advised to examine the choices you are going to have to make from the perspective of your value system and not your popularity.
Among those choices you might have make is to assure that your leadership strategy going into the decision process is not based on your personality or charisma but rather on a set of ground rules that are well defined.

It is my personal belief that the most stressful sets of circumstances that anyone can face in making a tough decision in tough economic times is when it is coming from the heart instead of from the head. In advance of such events there should be some introspective thinking on your part as to what you believe in, what you stand for and what you are willing to tolerate. Lacking definition of those three you are very likely to react to negative sets of circumstances in an emotional fashion.

I am not suggesting that by conducting that kind of internal assessment is going to be any easier but I am suggesting that if you don’t do it is going to be a whole heck of a lot harder.

In the final analysis, some of the phrases I used before are likely to be part of your world. You can’t chief off, you can’t chief around. Both of those are a conflict of strategies. But chiefing up means, confronting the dilemma.

That is what those trumpets are all about!

About the Author: Ronny J. Coleman is the former California State Fire Marshal, Past President of the IAFC and Chairman Emeritus of the Center for Public Safety Excellence. He has won numerous awards in his lifetime career devoted to writing about fire and life safety. You can read more of Chief Coleman’s columns at http://www.cafsti.org/tabletalk/ Reprinted by permission. © 2014 Ronny J. Coleman All rights reserved
Last Alarms

The USFA reported 87 deaths in 2014 and 2 deaths in 2015 to date. The following line of duty deaths were reported since we published our last issue:

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<td>2014</td>
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<td>Ricky Doub ♥</td>
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<td>Yadkinville, NC</td>
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<td>Joseph Sanford Jr. ♥</td>
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<td>Inwood, NY</td>
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2014 Totals

♥ 38 (44%) ♥ 5 (6%)

♥ Indicates cardiac related death
♥ Indicates vehicle accident related

2015 Totals

♥ 2 (100%) ♥ 0 (0%)

♥ Indicates cardiac related death
♥ Indicates vehicle accident related

TCoOO Update

Check with your Fire Chief if you wish to make a leave donation.

There are currently 29 DoD firefighters in the Taking Care of Own program.

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<thead>
<tr>
<th>Name</th>
<th>Location</th>
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**Oshkosh P-4A ARFF Vehicles**

By Tom Shand, Photo from the collection of Ted Heinbuch

Advances in airfield fire protection can be traced to improvements with foam agents and the vehicles tasked to deploy our personnel and firefighting assets. During the 1960’s studies conducted by R.L. Tuve and E.J.Jablonski at the Naval Research Lab patented the formula for AFFF foam which led to combining this agent with Purple K powder for use in twin agent units. Their report titled *A New Vapor Securing Agent for Flammable Liquid Fire Extinguishing* released in March, 1964 forever changed the face of foam application and agents.

In 1971 Oshkosh Truck Corporation began to produce the model P-4 ARFF vehicle for the U.S. Air Force. Over the years the Air Force took delivery of 341 of these advanced ARFF vehicles with other branches of the service specifying different versions of this unit. Between 1975 and 1978 the U.S. Navy placed 41 Oshkosh P-4A ARFF vehicles into service for use at installations to replace the smaller MB model units.

The P-4A was built on a 170 inch wheelbase and an overall length of 25 feet, 5 inches. The apparatus was powered by a Caterpillar model D-336 diesel engine rated at 405 horsepower with a six speed, twin disc automatic transmission. The aluminum body was designed with an escape hatch on the cab roof with side crew cab doors and a number of enclosed body compartments.

Firefighting equipment included a Waterous single stage pump rated at 1200 gpm with an 80 gpm foam pump. In the structural mode the pump could deliver 1000 gpm through the four 2 1/2 inch gated discharges. The P-4A was equipped with a 1500 gallon water tank and a 180 gallon foam tank. The roof turret had dual ratings of 400/800 gpm with a bumper turret rated at 300 gpm. A single booster reel was outfitted with 150 feet of 1 1/4 inch hose that could deliver 100 gpm. A Feecon around the pump foam system supplied foam to the bumper and roof turrets.

These P-4A ARFF vehicles provided many years of reliable front line service with some units slated for SLEP rebuilding. All of the Navy Oshkosh vehicles were originally delivered with a yellow paint scheme and minimal warning lights and graphics. The Naval Air Development Center in Warminster, PA operated a 1976 model P-4A unit that was assigned Navy property number 71-02462. As depicted in the photo, ARFF 1 was modified with additional roof mounted strobe lights and a Santa Rosa hydraulic monitor above the front bumper. The boxy appearance of the P-4A belied its off road capabilities with many of these vehicles serving until the late 1990’s when they were replaced with the Oshkosh T series ARFF units.
Parris Island Starts STEMI and Stroke Programs

By Garry Huyck, Assistant Chief

Parris Island Fire & Rescue, in concert with Beaufort Memorial Hospital, began ST Segment Elevation Myocardial Infarction (STEMI) and stroke programs throughout 2014. The process of initiating this program began in December 2013 when Beaufort Memorial Hospital approached Parris Island F&R to determine our interest. We stated that we were interested in the program and started the process of obtaining an IT waiver to install and utilize Physio-Control’s LIFENET® system on our Lifepak® 15s. All personnel, including EMTs, received training in basic and 12-lead ECG recognition.

The STEMI program paid immediate dividends, as our first recognized patient went into cardiac arrest while en route to the hospital, was successfully resuscitated and sent to the catheterization lab. The door to balloon time was 96 minutes, only six minutes over the American Heart Association’s recommended time of 90 minutes. As of this past November, all three of our ambulances, two engines, one ladder truck, and our paramedic QRV were equipped with Lifepak 15s with LIFENET capabilities.

The stroke program began in May when the hospital approached our department about getting involved and once again, we accepted the challenge. After several meetings with the hospital’s Stroke Coordinator, the stroke team provided program training and lab techs provided information and training on drawing labs in the field. On December 1, our department participated in a drill with Beaufort Memorial Hospital to test the new system. Using one of our firefighters as a simulated stroke patient, the door to drug time was 48 minutes from EMS activation to assessment in the emergency department.

The County’s EMS agency has not yet started the program, so we have been involved with the hospital’s program education, community outreach, and participation on committees. We are so involved with these programs that a Firefighter/Paramedic has been assigned as our STEMI/Stroke Coordinator. Parris Island Fire & Rescue is excited to be a part of these programs, which will enhance our EMS capabilities on the installation and in the surrounding communities.
**WMD Training at NSA Crane**

On 10 December 2014, the 53rd Weapons of Mass Destruction-Civil Support Team (WMD-CST) based out of Indianapolis, IN presented the CNRMA Fire and Emergency Services, NSA Crane a plaque and a letter of appreciation for participation and assistance with a training exercise conducted aboard NSA Crane on 3 November 2014.

The exercise was a difficult scenario involving an unknown package located in a remote area of a large building. Initial response was provided by NSA Crane Explosives Ordnance Disposal Detachment 2 and Fire and Emergency Services. Access to the package was initially gained remotely utilizing the EOD robot and later approached by EOD personnel wearing full blast protective garments and utilizing advanced explosive and chemical detection equipment. As the scenario unfolded and the scope of the potential hazard broadened, the equipment and expertise of the 53rd was requested to the scene. Throughout the duration of the exercise, F&ES maintained overall command and worked closely with both EOD and 53rd personnel on charting the best course of action to bring the training event to a successful conclusion.

The exercise was very well executed and the knowledge and experience gained from it was of benefit to all.

The letter read in part: “All the participating members of the NSAFD provided a realistic and challenging scenario with an exceptional training venue. The 53rd WMD-CST was fortunate in having the opportunity to work along-side the Fire Department and their on-hand resources which added even more depth to this training exercise.” The letter concluded with: “The 53rd WMD-CST is a sharper ‘Tip of the Spear’ thanks to the entire NSA Crane Fire Department”

The letter was signed by LTC Ronald L. Crane, Commanding Officer
New CFO

CPSE Recognizes Lejeune Fire Chief

By Cpl Jared Lingafelt

Marine Corps Installations East and Marine Corps Base Camp Lejeune Fire and Emergency Services chief, Chris Parker, was recently designated as a Chief Fire Officer, making him the only one in the Marine Corps.

The CFO designation is not only a step along the way to self-improvement for Parker, but also a deeper commitment to the base and surrounding community.

“Chief Parker is a dedicated and experienced professional who constantly strives to improve the performance of his organization while at the same time providing a high quality and safe working environment for his personnel,” said Kevin King, Director of Fire and Emergency Services, HQ USMC.

“This (CFO) recognizes a high level of professional competence that is documented through professional, educational, technical and community service achievements to provide a high quality Fire and Emergency Services Program. According to the Center of Public Safety and Excellence, the CFO designation was originally designed to recognize fire officers who have demonstrated excellence and outstanding achievements throughout their career.

To receive the designation Parker was evaluated by an outside organization of top industry professionals who investigated various aspects of his career, organization and leadership abilities.

“I asked a third party to come in and evaluate me as an individual and chief officer of the organization to determine if my leadership abilities, management abilities, education and background are suitable for the CFO designation,” said Parker, a Swansboro, North Carolina, native.

Although the CFO designation is unprecedented in the Marine Corps, Parker says this is a stepping stone on the path to improving himself, his fellow colleagues and his organization.

“I think this validates my purpose as a fire officer,” said Parker. “It reassures me on what I believe are the right things to do in my leadership, and it means a lot to me because it makes me humble enough to understand that I’m not at 100 percent and there is a plan out there to help further improve our organization.”

A professional is someone who can do his best work when he doesn't feel like it.

- Alistair Cooke
Are You Sure You Want To Be In Command?
By Deputy Chief Billy Goldfeder, Loveland-Symmes, OH, www.FireFighterCloseCalls.com

“We’re fortunate we didn’t lose four firefighters that day...and if things don’t change, we’re going to lose more...”

I remember years ago watching young firefighters in volunteer companies race to ride the front seat—after all, the radio, the sirens and the horns were the priority. In career departments, firefighters would want to "ride up" when the Lieutenant or captain had the day off, sometimes for the same reasons. I did both as many of you did—and do.

Be it the front seat or arriving in a car, the SUV or whatever, having command means you literally own that scene and you are responsible for everyone, everything and anything that can happen. It's no BS and serious, serious stuff. I'm not sure I can emphasize that any more than so many fire service writers have over so many years.

The first interesting transformation happens (hopefully) when firefighters go from firefighter to company officer—and you have to deal with (as Chase Sargent says) the "Buddy to Boss" stuff. It's a big deal.

Being an officer is not "easy" in career or volunteer departments. Actually, in particular, volunteer departments have the greater challenge because there is usually no first line supervisor training, and, you often end up being the boss over your own buddies, friends, pals and relatives—all members of your VFD.

What training was provided to you—or did you take to prepare you and/or qualify you to ride the front seat?

The next real interesting transformation (again, hopefully), is when a company officer goes from the front seat of the rig—to the front seat of the chiefs car, chief SUV or whatever your command officers arrive in. You get elected. You get appointed. Whatever. Suddenly, you own that scene. It's a huge deal. You are the bottom line of every aspect and action at that incident. You ARE command, control, accountability and communication. Your "day" has come—and hopefully, those before you have provided solid and verifiable training that is actually applicable to the job you now own—and the massive responsibility you now have.

What training was provided to you—or did you take to prepare you and/or qualify you to respond and operate as a command officer—or, potentially as, THE incident commander?

When things go right—and hopefully they do purposely, it's a good day—and that is what happens most days. Again-hopefully by design vs. "just because."

However—when things go wrong on the fire or fire training ground, it can be life altering.

Life altering to civilians.
Life altering to your Firefighters.
Life altering to you...which includes your family and friends around you.
So many Chiefs and Firefighters that I work with following Line of Duty deaths essentially gauge their lives as "before" and "after" the death of their Firefighter. Life altering.

Take a few minutes to become very familiar with these two particular incidents involving the predictable and preventable Line of Duty deaths of two Firefighters.

These were not heroic deaths.

The first is the Line of Duty Death of Dallas (TX) Firefighter in a multi-family building fire. If you have ever commanded (or dreamed of commanding) a fire, absolutely read this article-and the reports. It clearly identifies decisions by the incident commander as being critical factors leading to the death of a Firefighter.

Check these excerpts out:

State and local investigative reports show that commanders’ decisions were largely to blame for the death of a Dallas firefighter last year. A State Fire Marshal report found that the department’s commanders failed to conduct proper risk assessment, supervise personnel adequately and make the right decisions about how to battle the blaze and whether to search the buildings. The Dallas Fire-Rescue line-of-duty-death report makes similar conclusions and details confusion that night between commanders as the building burned. It also gives conflicting accounts on what the commander on scene, Deputy Chief Bobby Ross, told crews to do.

The account of many firefighters on the scene, matches what the Fallen Firefighters longtime friend Jim Crump, a retired Dallas firefighter, had said early on in the investigation.

Crump said reading the report “made me want to cry.” He said he believes Ross was careless and didn’t follow procedures he had been taught. “Regardless of how well-meaning he thought he was, he broke every rule that is established for a fire commander,” Crump said. “And it cost a Firefighter his life.”

“We’re fortunate we didn’t lose four firefighters that day”.... “And if things don’t change, we’re going to lose more...”

The second is the Line of Duty death of a Fire Officer during "smoke diver" training...surrounded by firefighters, officers and instructors-this Firefighter could have been saved—but wasn't.

Check these excerpts out:

Firefighter Neal Smith was almost out of the second floor of the six-story training tower when he became disoriented and fell to his knees. He was one of a few to clear a bunker with air left in his tank; others quickly depleted their supply as instructors, perched above the rafters, threw firecrackers and lassoed the trainees’ air tanks with bungee cords. Trainees had to slide beneath a plywood plank screwed to the entryway 30 inches above the floor and conduct a counter-clockwise sweep of the room while keeping their right hands on a wall.
Visibility was impaired by a fog machine and by a web of fire hoses and landscaping timbers hanging above a floor littered with golf balls and marbles.

Weighed down by 75 pounds worth of gear that included an air tank, mask, coat and trousers still saturated with sweat from the previous day's exercises, trainees had to navigate their way through pallets, tires, metal pipes and burned-out box springs to reach a 2-by-10 wooden box with one end propped upon a barrel. The men had to crawl through the box, which spilled out into a floored elevator shaft, and then crawl back through to continue the sweep.

Smith's teammate went through first. By the time Smith shimmied inside to look for the hypothetical victim, his internal temperature was pushing 108 degrees, and his brain was swelling. Instead of continuing the search when he crawled out of the box, he circled back in.

An instructor spent five minutes yelling at Smith to get out of the box and continue his search. Smith didn't make it far: At a 55-gallon drum only a few feet from the box, Smith dropped to his knees. The instructor yelled at Smith to move. When that didn't work, the instructor ordered Smith's teammate "to go around him"..... he turned and saw the reflective tape on Smith's helmet. There was no movement.

The teammate made it out to the second floor landing when the call went out: Mayday. Mayday. Mayday.

FIREFIGHTER DOWN!!!!

They administered CPR, then tried a defibrillator, but Smith's skin, slick with sweat and hot to the touch, prevented a connection. Ten minutes later, an ambulance rushed Smith to the emergency room. Doctors swathed Smith's overheated body in ice packs and cooling blankets. They cranked up cooling fans and shot him up with cold liquids. None of it would save his life.

At the end of the two-day course with 22 trainees, 13 completed the course, two students had washed out, two others went to the hospital, and four students did not return for the second day, saying they had safety concerns or the course wasn't as advertised. And Smith was dead.

According to the subsequent investigations, what may have saved him -- or at least increased his odds -- was one very simple thing: a tub of ice water at the scene.

PLEASE take some time to read the entire articles and the related reports. If these reports do anything, they remind us that like every firefighter, training as a command officer never stops. Actually- it has to START. What training do your officers receive to ride the front seat? To arrive first, size up and make immediate decisions?

What are the continuing education and training courses made available to your officers? Everyday is a training day...from reading, reviewing, studying, simulators, hands on, live drills or whatever-the "coaching staff" of the fire departments responsibility to take care of their "players" is never ending-it's a massive responsibility-and it is not for everyone.
These reports also remind us of our total no BS responsibility to take care of our people in what can certainly be tough conditions....but that is our 24/7/365 commitment and responsibility. While our people operate in tough conditions-and just like we expect them to perform as expected operating "interior"-they must be able to expect and count on us on the outside, in command roles, to do what we must do - to take care of them.

And lastly, these reports remind us that in 2014-people are asking questions, families want to know, investigations are conducted, and attorneys are lined up to help them determine the truth on how and why their loved ones died. They are asking you. Your Officers. Your Chiefs. Your Commissioners.

Command is nothing new in the fire service. However, the defined responsibility, the tasks, complexity and expectations have evolved over the years into what we know as today as an extremely intense role requiring training and skills like never before.

Need more proof? Seriously?

REPORTS AND ARTICLE LINKS:

Billy Goldfeder has been a firefighter since 1973 and a chief officer since 1982. Is is the Deputy Fire Chief at the Loveland-Symmes FD in the greater Cincinnati area of Ohio. He serves on the board of directors of the International Association of Fire Chiefs, the National Fallen Firefighters Foundation, the September 11th Families Association and the National Firefighter Near-Miss Reporting System. He is also a contributing or associate editor for Fire Engineering, Fire-Rescue and Firehouse Magazines. He co-hosts www.FireFighterCloseCalls.com with Gordon Graham. Billy can be reached at www.FireFighterCloseCalls.com

Cherry Point Lifesaving Award
By R. Todd Wade, Fire Chief

Several members of the Cherry Point Fire Department were recognized recently with the Marine Corps Lifesaving Award for their efforts during an incident involving a cardiac arrest. On 13 March, Engine 3, Medic 1, Medic 3 and the Assistant Chief of Operations responded to the swimming pool at the Aviation Survival Training Center. A civilian participating in training was found unresponsive in the pool and was removed by personnel involved with the training. They immediately began CPR and defibrillated the patient, using an AED.

The first unit arrived within one minute of dispatch and assumed care of the patient. CPR was continued and an advanced airway was established. Within a couple of minutes, the patient’s pulse returned. He was transported to a local hospital and care turned over to the emergency room staff within 36 minutes from time of dispatch. The patient was discharged within a week with no neurological deficits and is expected to make a full recovery.

Firefighter Paramedics Lawrence Berdan, Jeremy Misenhelder, and Dean Urquhart, Firefighters Craig Crytzer, Maurice Phelps, Christopher Powell, and Thomas Williams, and Captains James Johnson and Edward Hudson were recognized with Lifesaving Awards from Commander, Marine Corps Installations Command. Congratulations on a job well done.
Is It Time For A Financial Checkup?

Tips that can help you fine-tune your money management

Any time of year, but particularly the start of a new year, is a good time to reflect on how you are managing your finances and to consider whether you would benefit from some changes. Here’s a checklist of questions and suggestions that can help you better evaluate and meet your goals.

Saving

What are my current short-term and long-term financial goals? Write them down. They may include paying off a debt, buying a home or a car, or financing a child's college education. "With goals and target dollar amounts in mind, you may be more motivated to save money and achieve your objectives," said Luke W. Reynolds, Chief of the FDIC's Outreach and Program Development Section.

Can I do better making automatic transfers into savings? "Arranging for your bank or employer to automatically transfer funds into savings or retirement accounts is a great way to build savings, but don't just set it and forget it," said Keith Ernst, Associate Director of the FDIC's Division of Depositor and Consumer Protection in charge of consumer research. "Ask yourself whether you should increase the amount you are automatically saving."

Do I have enough money in an emergency savings fund? The idea is to cover major unexpected expenses or a temporary reduction in income without borrowing money. Figure out how much you would need to pay for, say, three to six months of essential expenses (housing, transportation, medical costs and so on). If you don’t have that much money in a savings account, start setting aside what you would need. For anyone struggling to build a "rainy day fund" or reach any major savings target, setting up automatic transfers is a steady way to work toward that goal.

What about retirement savings? Start by calculating how much money you will need for retirement, perhaps by using an online estimator. According to the Social Security Administration (SSA), most financial advisors say to aim for a combination of Social Security payments, pensions and personal savings that equal at least 70 percent of your pre-retirement earnings in order to maintain your pre-retirement standard of living. Even if you are just starting out in the working world, look into all your retirement savings options, as they may come with tax savings and employer matches. And, if you are self-employed, find useful information from the IRS at irs.gov/Retirement-Plans/Retirement-Plans-for-Self-Employed-People. To estimate your Social Security benefits when you retire, you can contact the SSA at 1-800-772-1213 or go to socialsecurity.gov/estimator.

Do my checking and savings account choices meet my needs at a reasonable cost? Start by talking to a representative at your current bank and/or visiting your bank's Web site. That's because some banks only offer certain deals in their branches but not online, or vice versa.
"If you paid checking account overdraft fees recently, look into ways to avoid them, starting with keeping a closer eye on your balance," said Luke W. Reynolds, Chief of the FDIC's Outreach and Program Development Section. "And for money you don’t need in the near future, remember that nondeposit investment products may have the potential for a higher return but you can also lose some or all of the money you invest." He added that if you have multiple accounts, consider whether consolidating them may save you money and time in monitoring transactions.

Taking Precautions

**Am I adequately insured?** Having enough life, health, disability, property and other insurance is essential to protect your finances from a sudden shock. Learn more at **insureuonline.org**, a Web site from the National Association of Insurance Commissioners. You may find savings on your existing policies by getting updated quotes from your current insurer and comparing them to quotes from at least two other companies.

**Am I prepared financially in case of a fire, flood or other emergency?** In addition to having your most important possessions insured, ask yourself how your most important documents would be saved from ruin. For more information, including how to assemble a preparedness kit if you had only a few moments to evacuate your home, read tips from FEMA — the Federal Emergency Management Agency — at **ready.gov**.

**Is the personal information on my computer and/or smartphone properly protected?** Use and automatically update anti-virus software and a firewall to secure your computer. Arrange for your computer or phones to regularly download and install any "patches" (system updates) the manufacturers produce to address security weaknesses. For unlocking your computer and mobile devices and for logging into Web sites and apps, create "strong" IDs and passwords with combinations of upper- and lower-case letters, numbers and symbols that are hard to guess, and then change the passwords regularly. "Try not to use the same password at more than one site," advised Michael Benardo, manager of the FDIC's Financial Crimes Section. "And if you feel a need to keep a written list of passwords, which is not recommended, try instead to use word and number combinations that vary slightly between sites, which may be easier for you to remember."

**Am I taking precautions with my personal information when I go to social networking sites?** Scammers try to collect even minor details about an individual, such as a pet's name or a high school mascot, in hopes that they can use this information to reset the passwords on a bank or investment account and commit fraud. Social media sites are places where criminals can often find this information. For guidance on limiting your information at social media sites, see tips from the Internet Crime Complaint Center at **ic3.gov/media/2009/091001.aspx**.
If there's been a death in the family, have I reviewed what that could mean for our FDIC deposit insurance coverage? It's especially important to make sure your accounts are properly structured if a co-owner or a beneficiary you named has recently died. As an example, if you have a joint account with a co-owner (such as a spouse) who passes away, the FDIC will continue to insure the account as if the co-owner is still alive for a maximum of six months. That six-month grace period is intended to give survivors or estate executors a chance to restructure accounts, if needed, to stay within the insurance limits. After six months, if no change is made, the account will be insured for a maximum of $250,000, and you will be considered the sole owner of the funds. Similarly, if you have one or more payable-on-death (POD) accounts that include a beneficiary who has died and you have not replaced that person with another beneficiary, the amount of insurance coverage will decrease immediately; there is no six-month rule for deceased beneficiaries.

"If there are changes in the ownership or beneficiaries named to your accounts, you can call the FDIC at 1-877-275-3342 to make sure your deposit insurance coverage is adequate," said Martin Becker, Chief of the FDIC's Deposit Insurance Section.

Do I have the necessary legal documents for managing my money if I become disabled or when I die? These may include a “power of attorney” permitting someone else to handle transactions and make decisions on your behalf if you are unable to. And if you haven’t already done so, consider consulting with an attorney about creating or updating a will and/or a trust to guide the distribution of your money and property after you die.

Am I keeping the right financial records? When it comes to paper versions of records like old bank statements, credit card bills and receipts, consider keeping only those you may need to protect yourself in the event of, say, a tax audit or a dispute with a merchant or manufacturer. Documents you don’t need can be discarded, but shred or otherwise securely destroy records that contain personal information. It’s also good to keep a list of your financial accounts and personal documents in one secure place, so that a loved one responsible for your affairs could easily find it.

Spending

Do I have a good plan for how I spend my money? Start by listing how much money you take in over a typical four-week period, what expenses you need to pay, and how much goes to savings. Include any large expenses you pay annually or semiannually, such as taxes or insurance premiums. Also pay attention to small expenses, from entertainment to snack food, which can take a toll on your finances. Then jot down ways you can control your spending. Online tools also can help you develop a more comprehensive budget.
Are all the expenses I'm paying for automatically each month really worth it? Some expenses you've put on auto-pilot may look small but can add up over the course of a year. Start by reviewing your credit card and checking account statements for expenses that get charged on a recurring basis. Consider whether you still get value from each product or service. Also find out if you may already be receiving the same benefits elsewhere or if you can negotiate a better deal with the company.

"Examples of spending you might be able to reduce could include memberships, extras on your cable TV subscription, or certain options on a cellphone package," said Reynolds. "And, if you are paying for identity theft or credit protection plans [products that would postpone or make your loan payments if you die or become ill or unemployed] ask yourself whether you get the value you pay for them. Keep in mind that federal law affords you considerable protections in the event of fraudulent activity involving your bank accounts or credit cards."

Borrowing

Am I reviewing my credit reports for accuracy? Correcting errors may help you improve your credit history and credit score, which can save you money when you need to borrow money. And reviewing your credit reports can help you detect identity theft or errors that could cause you other hassles, such as higher insurance premiums.

Federal law gives you the right to one free copy of your credit report every 12 months. There are three major nationwide consumer reporting agencies (also called "credit bureaus") — Equifax, Experian and TransUnion — and each one issues its own report. Go to AnnualCreditReport.com, or call toll-free 1-877-322-8228, to order your free credit reports from each agency. There also are "specialty" credit bureaus that, for example, track a person's history of handling a checking account or prepare risk profiles that insurers may use when determining your insurance premium. For more information about your rights, start with either the Consumer Financial Protection Bureau (consumerfinance.gov or toll-free 1-855-411-2372) or the Federal Trade Commission (ftc.gov or toll-free 1-877-382-4357).

Is there more that I can do to cut the costs of a mortgage loan? For example, if you have an adjustable-rate mortgage with an interest rate about to go up, find out if there are lower rates for which you might qualify. Also inquire about your options for refinancing into a different, better loan. You also can research the pros and cons of making additional payments to principal (to pay off the loan sooner) or even paying off the mortgage outright.

Can I do more to reduce the interest I'm paying on other debts? Any reduction of outstanding debts, particularly those that charge you the highest interest rate, will bring you savings in interest expenses. For example, look into paying all — or at least more — of your credit card balance.
Am I truly benefiting from my credit card rewards programs? These features can be beneficial, but you have to know what to do to earn extra cash or keep "points" or miles. A rewards program also may have changed since you last looked at it. Also, don't let the allure of rewards be the only factor in choosing a card. "It's not just cash back or points that can make a card appealing. Features like a low interest rate and minimal or no fees can also be beneficial," said Elizabeth Khalil, a Senior Policy Analyst at the FDIC.

If you're considering closing a credit card account that you've managed well for a long time, instead consider the alternative of keeping the card but not using it. That's because closing the account could adversely affect your credit score, which lenders often use to determine your interest rate. According to Jonathan Miller, Deputy Director for Policy and Research in the FDIC Division of Depositor and Consumer Protection, "If you do keep the account open and continue to use the card occasionally, be careful to keep it in a secure place and periodically monitor the account to make sure a fraudster isn't using it instead."

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27 Paydays in Pay Year 2015

Periodically, the pay year will be comprised of 27 paydays instead of the more common 26 paydays. When this occurs as it does for pay year 2015, some deduction and withholding amounts may be affected.

Deductions Impacted Due to 27 Paydays in Pay Year 2015.

Federal Tax - The Defense Civilian Pay System (DCPS) annualizes biweekly earnings to determine the tax deduction amount. 27 paydays may increase the biweekly tax deduction.

State Tax - DCPS also annualizes biweekly earnings to determine the State Tax deduction amount. 27 pay periods may increase in the biweekly state tax deduction.

Local Tax Deduction – Most local taxes are based on percentages applied to subject earnings, and as such would not be impacted. However, there are some local taxes that are based on the Federal withholding and therefore could be impacted.

Thrift Savings Plan (TSP) – Federal Employees Retirement System (FERS) employees may exceed the TSP maximum deduction amount if 27 paydays is not used to determine the pay period deduction amount. Employees are encouraged to review their TSP elections during the next open season for 2015 to avoid a potential loss of TSP matching Government contributions.

TSP Catch-Up Contributions – The amount to be withheld each payday may be calculated using 27 paydays versus the normal 26 paydays.

If there are questions regarding this information, please contact your local Customer Service Representative (CSR) or servicing payroll office.
**New Fires, New Tactics**

By Jesse Roman, NFPA Journal

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To some, Dan Madrzykowski’s fire science research is groundbreaking, while to others it’s somewhat less exciting. Madrzykowski likes to tell a story of a fire chief from Iowa who gushed to his wife that the new research was revolutionizing how the fire service does its job, and was possibly the best new information he’d heard in 40 years.

“So his wife asks him, ‘Well, what’s the big change?’” recalls Madrzykowski, a fire protection engineer at the National Institute of Standards and Technology (NIST). “The chief says, ‘They’re telling us to get water on the fire as soon as possible.’ His wife gives him this bewildered look and asks, ‘What have you been doing?’”

Madrzykowski, who wears thin-rimmed glasses, short-cropped salt-and-pepper hair, and a matching horseshoe mustache, laughs heartily at the story, which he says shows how far removed from science some of today’s firefighting tactics have become. One of his favorite quips is, “The fire forgot to read the firefighting manual.”

For more than a decade, Madrzykowski and his research partner, Stephen Kerber, the director of the Firefighter Safety Research Institute (FSRI) at Underwriters Laboratories (UL), have been working together to change that, and to bring hard science back to the fire ground. In recent years, UL and NIST have combined to conduct more than 200 structural fire experiments to measure how fire responds to different variables and modes of attack. The work represents the most extensive scientific look in decades at firefighting tactics and is uncovering what the researchers say are serious flaws in how today’s fires are fought. According to Madrzykowski and Kerber, techniques accepted as gospel have been shown to be potentially deadly in modern fires, which tend to burn hotter and faster than they did just a few decades ago.

While their research has led to several revelations, three main ideas have received the most attention: flowing water onto a structure fire from the outside, or “hitting it hard from the yard,” is often the best option and can save the lives of civilians and firefighters; venting is not always a life saver and, in fact, can quickly turn deadly; and water cannot push fire into other parts of a structure.

All of those ideas run contrary to the conventional wisdom of many fire departments, which for decades have utilized venting and aggressive interior attacks, moving from the unburned to the burned side of a structure to avoid pushing smoke and fire further into the building.

Together and separately, Kerber and Madrzykowski spent upwards of 150 days on the road last year spreading this message, presenting at seemingly every fire organization gathering in the country, and often leaving a room of disciples in their wake. The buzz surrounding their work appears to be reaching a tipping point, and is a topic of discussion for fire chiefs from Des Moines to Daytona.
The information is also driving some of the most significant tactical changes the fire service has seen in decades. Last year, an addendum including these suggestions was published in Jones & Bartlett’s Fundamentals of Fire Fighter Skills, third edition, one of the nation’s most popular firefighter training manuals. This year, with funding from the Assistance to Firefighters Grant program, instructors from the International Society of Fire Service Instructors will hold two workshops in each of the 50 states to train firefighters on the new tactics. Last September, the Urban Fire Forum, an annual meeting hosted by the Metro Chiefs membership section of NFPA, brought together 25 fire chiefs from around the country who unanimously adopted a position paper encouraging fire departments to adopt the new tactics.

The research’s impact has been felt most strongly on the fire ground. Departments such as the Fire Department of New York, the Los Angeles County Fire Department, and the Oklahoma City Fire Department have altered tactical procedures based on the findings. In Los Angeles County, for example, the new material is now taught in a partnership with College of the Canyons, is tested in promotional exams, and is addressed in training at all departmental levels.

In the eight months after the changes were made in L.A. County, firefighter injuries were down 45 percent and property loss was down 7 percent from the previous eight months, according to L.A. County Chief Daryl Osby. Just as important, fire officials felt they had a better sense of the science behind what they were experiencing on the job. “In my experience, when we lost a single-family house, we didn’t always understand why,” Osby says. “Now we understand the dynamics and are incorporating that into the field.”

That is exactly the aim, Kerber says, because that understanding may be more critical to life and death than ever before.

“When a firefighter gets hurt or killed, the desire for change comes up,” he says. “One of the potential consequences of this job is death, which shows the importance of applying tactics the right way.”

Bigger, stronger, faster

Fires today can develop more aggressively and potentially pose more dangers than just a few decades ago. That’s largely because the contents and construction materials in modern houses can be much more volatile than they used to be.

Previously, furniture was made with hardwoods; today the predominant material is fast-burning non-hardwoods, including particleboard. Mattresses and couches once stuffed with cotton are today filled with synthetic materials, including energy-rich, highly combustible substances such as polyethylene foam. “Pound for pound, the energy rate has increased three or four times,” Madrzykowski says of modern furnishings. “It makes it likely that firefighters will encounter a fuel-rich load when they get on the scene.”
Tactics (Cont.)

The introduction of new lightweight construction materials in residential homes, which can fail much faster under fire conditions than traditional solid wood beams, has added to the problem. Taken together, modern homes and their contents can burn eight times faster than homes of decades ago, according to UL.

In one particularly striking video in their presentation, Madrzykowski and Kerber present a split screen showing two living rooms. One room contains “legacy furniture”—chairs and side tables made of hardwoods, and a couch with cotton-filled cushions—and another room containing modern furniture constructed of foam and particleboard. The couches are set on fire. The room with the older furniture burns slowly and deliberately, growing steadily; it takes nearly 30 minutes for the room to reach flashover. The furniture in the modern room burns much more aggressively, and the room reaches flashover in just 3 minutes, 40 seconds. According to a recent NFPA study, from 2007 to 2011, the national average response time for fire departments to home structure fires was close to six minutes.

One construction characteristic of modern homes, however, can actually have a damping effect on a fire’s volatility. Modern homes tend to be well-insulated, Madrzykowski says, often with double-paned windows and tight construction envelopes. As a result, “fires start and quickly become ventilation limited—the oxygen in the house that the fire needs for combustion is consumed,” he says. In that environment, a fire will burn very inefficiently, producing thick black smoke consisting of unburned hydrocarbons—gaseous fuels unable to ignite because of the oxygen-starved conditions. But if a door or window is opened, oxygen rushes in and the fire can erupt violently. “In a small home, it could go from nothing but smoke to flashover in 30 seconds, and in a larger home maybe in two or three minutes,” Madrzykowski says.

This understanding of airflow is central to the message Madrzykowski and Kerber are communicating. Their presentation includes dozens of videos that demonstrate this process at work in structure fires. In one video of a residential fire, smoke billows out of a ground-floor window of a single-family home. Firefighters break windows to ventilate the house, with the goal of removing deadly fumes and cooling the blaze. Fresh air flows into the new openings, and in seconds the fire grows dramatically. The firefighters retreat and hit the blaze with water, and within minutes it’s knocked down and extinguished.

An outside observer might consider this a success, Kerber says, but it’s not. “I guarantee you these guys are high-fiving each other still,” he says. “But if it had not been vented, that fire would've remained a one-room basement fire.”

Another video of a test burn shows a raging house fire; the home’s front door is open, but when firefighters close the door, sensors show that the temperature inside the burning house drops 1,000 degrees Fahrenheit in less than a minute. The fire recedes, struggling due to the lack of oxygen.
The message of the testing is clear: keeping a structure’s doors and windows closed until hose lines are ready to be deployed starves the fire of oxygen and keeps it small—a ventilation-limited fire. Conversely, opening windows and doors before hitting the fire with water can make the blaze quickly grow. Venting too soon, or in the wrong spots, can also cause the fire to rapidly spread to other parts of the structure. Venting is still critical, the researchers say, but only after the fire has been hit with water.

Another key finding of the research is that hitting the fire with water from outside the structure for just a few moments prior to entering cools the entire structure dramatically, and increases survivability for victims and firefighters. For decades, Madrzykowski says, the fire service has been taught not to flow water from the outside, fearful it could harm potential victims trapped inside with steam or by pushing smoke and fire in their direction. It’s also widely believed that attacking a fire from the burned side will push the fire into the unburned parts of the structure. The research concludes just the opposite—water cannot push fire, but does dramatically drop the temperature inside. In other words, Madrzykowski says, hitting the fire with water as soon as possible has many advantages.

“I would not consider this to be revolutionary,” says Madrzykowski. “I just consider this the pendulum of firefighting tactics coming back to center. You look at the firefighter attack of 1950s and 1960s, and they were doing almost exactly what we’re talking about now. Even training books of the 1800s talk about controlling the door and being aware of the draft. The fire service, unfortunately, lost some of its fire behavior knowledge over time, and we’re trying to put that back.”

**A bridge to the fire service**

A confluence of events over the last 40 years led the fire service to adopt aggressive interior-attack tactics. That approach focused on getting the attack crew as close to the fire as possible before flowing water, with the priority being locating and removing trapped civilians.

In the 1970s, a rise in new firefighter technologies, such as self-contained breathing apparatus and more advanced turnout gear, allowed firefighters to get closer to fires than ever before. Additionally, events like the publication of the landmark 1973 document “America Burning,” undertaken by The National Commission on Fire Prevention, led to important new developments, including the creation of the U.S. Fire Administration and the National Fire Academy. But it also directed research away from fire tactics and fire dynamics in structures, Kerber says, and toward fire prevention and ways to make buildings more fire-resistant. That work helped lead to dramatic decreases in the number of fires over the past four decades, and in the corresponding deaths, injuries, and property loss. Even as those numbers fell, though, the per-fire rates of injury and death for firefighters remained constant.
The fire service, now better-protected against smoke and heat, began adopting much more aggressive interior tactics for fighting residential fires. Those tactics in some cases were dramatically different from the techniques that had been the norm for more than a century; previously, attacking a fire from the outside was not just a tactical decision, it was the only option available. By the 1980s, though, “fire departments were not so concerned about whether they had water on the fire as they were doing a rescue search—they could withstand the additional heat and toxic gas,” Madrzykowski says. “But the changing fire environment caught up to that level of protection. Now it can overwhelm it very easily, and that’s what we’re seeing today in line-of-duty deaths.”

In the 1970s, an average of 1.8 firefighters per 100,000 fires died while operating inside a structure, according to data compiled by NFPA’s Fire Analysis and Research Division. By the 2000s, though, the average number of firefighter deaths occurring inside a burning structure had jumped to three per 100,000 fires. According to NFPA data, interior operations on average account for about 13 firefighter deaths annually, of the roughly 80 firefighter deaths reported overall each year.

The fire service began paying attention to the problem in the 1990s, when airflow and wind-driven fires began killing firefighters at a higher rate. In 1999, two firefighters were killed in a residential fire in Washington, D.C., an event that became known as the Cherry Road fire. Scientists at NIST studied the fire and ran computer simulations of the blaze; they understood that airflow was a significant factor in such events, but they needed hard data to back it up. A NIST report published in 2000 revealed that the “the opening of the basement sliding glass doors provided outside air (oxygen) to a pre-heated, under-ventilated fire compartment, which then developed into a post-flashover fire within 60 seconds.”

NIST shared the results with fire departments through a webpage and by distributing a DVD. “The firefighters loved it, because they could take this and easily use it for training drills,” Madrzykowski says. “For me, that’s when the light bulb went off. I thought, ‘we’ve got to build that bridge and reach out to the fire service, because this information is news to them.’”

In 2001, NIST formed its Fire Fighting Technology group. That same year, Congress created the Assistance to Firefighters Grant (AFG) program, a step that was highly beneficial for fire-science research, Kerber says. In 2007, with the help of an AFG grant, the Fire Protection Research Foundation held a workshop on wind-driven fire and sponsored lab testing at NIST to study a structure fire’s response to wind. In early 2008, the Fire Department of New York (FDNY) received a grant to conduct a series of wind-driven fire experiments in a seven-story building on Governors Island in New York City with NIST. Within 18 months of those experiments, FDNY had developed new policies, tactics, and equipment to deal with wind-driven high-rise fires.
“While we were working with FDNY on this issue, what they came to realize was that wind-driven fire is just an extreme case of uncoordinated ventilation,” Madrzykowski says. “The reality was they didn’t fully understand the impact of ventilation, and as a result weren’t doing ventilation correctly. That’s when the ball really got rolling.”

UL began building and running full-scale tests on 3,200-square-foot colonial-style houses and 1,200-square-foot ranch houses inside its test facility near Chicago. Armed with another AFG grant, NIST burned 12 abandoned single-family houses in Spartanburg, South Carolina, in 2013 and 2014, performing multiple experiments on each.

“We collaborate on everything. Dan and I coordinate every project to make sure we are getting the fire service the best bang for our buck,” Kerber says. “The research usually raises more questions. The more we learn, the more we want to know. Between the questions we raise together and the questions the fire service asks us to answer, we have a lot to do.”

The answers seem to be coming fast these days. Asked if he agrees, Kerber says, “Before, nothing was going on, so everything seems fast.”

Differing approaches

In the fire world, the work done by Madrzykowski and Kerber either makes them rock stars or heretics, depending on whom you ask. A Facebook group called “Just Because I Don’t Agree With UL/FSRI Doesn’t Make Me a Bad Person” had 167 members as of November.

One member of that group is John Salka, a 33-year veteran retired FDNY battalion chief. Salka, the author of three books including The Engine Company, which looks at engine company tactics and operations throughout the U.S., is critical of some of the research. Salka observes that the researchers are able to set up every experimental variable, set the fire in a location of their choosing, and maintain total control over the proceedings.

He’s especially critical of the claim that smoke or fire cannot be pushed onto victims on the opposite side of the hose line. “I’ve been to thousands of fires, inside and outside, and my experience does not tell me what they are telling me,” he says. “I have been in a building where someone opened up a hose line outside in the wrong direction. It’s like a bolt of lightning—a sudden big burst of steam, smoke, and fire comes at you. It has a large negative impact on the exit side of the room.”

Longtime Seattle firefighter Aaron Fields, founder of Nozzle Forward, a training program for engine companies that trains about 2,000 firefighters each year around the country, believes the science and test results being put forward by Madrzykowski and Kerber. But he also says the realities on the fire ground can be different from those of the test ground. If UL and NIST methods aren’t followed precisely, or if optimal conditions do not exist—such as in a dense urban area where firefighters may not be able to get an exterior hose line into the proper position—things can go very wrong, Fields says.
Like Salka, Fields questions the research finding that suggests smoke and flame cannot be moved by an exterior water flow. Resulting steam from an exterior attack can also be deadly, Fields says, which is an area NIST has not fully researched. “The reason you go inside is not for the fire, it’s to rescue civilians,” Fields says. “Fire gases kill people before flames. If I go in, my job is to move the byproducts of combustion out and extinguish them.”

In his classes, Fields teaches that, for most fires, an aggressive interior attack using hose lines to extinguish the fire and drive out toxic gases is the most effective way of saving lives. Flowing water from the outside should be reserved, he says, for a defensive attack, or for situations where there is a significant delay in getting hand lines deployed. “Overall, I’m not in opposition to the research results,” Fields says. “All I’m saying is that the study is not complete.”

Kerber and Madrzykowski have heard these criticisms before, and are quick to acknowledge that they are not advocating a one-size-fits-all approach to firefighting. “Nobody is saying you can only hit the fire from the outside—we’re saying it’s a valid option and it should be in your playbook,” Madrzykowski says. “You have to size up every fire and decide what to do. If it’s a small fire, go in and get it. We’re really talking about adjustments to things the fire service is doing already.”

Despite the concerns, praise for the work being done by Kerber and Madrzykowski is coming from some of the highest ranks of the fire service.

“We need to speed up the education and implementation,” Ernest Mitchell Jr., the U.S. Fire Administrator, said at the recent Urban Fire Forum. “The question is, how do we get the word out so this science is not just saving lives in New York, L.A. County, and Oklahoma City, but everywhere?”

The International Association of Firefighters (IAFF), the largest firefighter union in North America, also supports the tactical changes and has developed a curriculum based on the research. Lori Moore-Merrell, the assistant to the general president at IAFF, said at September’s Urban Fire Forum that the number of hours dedicated to training recruits on fire behavior has to increase, but also recognized the challenges associated with that kind of change, describing it as a “paradigm shift” for many and urging the fire service to “get past the shock.”

Chiefs in Los Angeles County and New York said cultural hurdles within the fire service were the toughest to clear in implementing the new procedures. Deputy Chief Cecil Clay of the Oklahoma City Fire Department, who spearheaded adoption and personally trained about 1,000 firefighters in the new tactics, said many of his fellow officers were initially skeptical.

“Some have 20-plus years of firefighting experience, and now you’re trying to teach them another way. They say, ‘Hey, I know I’m doing it right because this is how I’ve always done it,’” Clay says. “But once we started doing this, I didn’t have to sell it anymore. The results have been remarkable.”
Clay describes the tactical changes in Oklahoma City as “a full 180-degree shift” from what the department had done just two years ago. “Like a lot of other departments, we took an aggressive interior approach,” he says. “Our tactics were to go from the unburned side [through the house] to the burned side. The theory was we’d be pushing the fire out. We also never applied water to the exterior in an offensive attack—we thought we’d push fire onto a victim. Through research and science we found out that both are totally false.”

Firefighters in Oklahoma City are now taught to conduct a 360-degree size-up of a structure to see where the fire is venting to decide where water should be applied. If smoke is venting on side A, they hit it with water through a window on side A before venting or searching. Thermal imaging at fires in Oklahoma City has shown that hitting the ceiling with water and letting it bounce down on the fire like a sprinkler—a technique found by NIST and UL tests to be most effective—cools the room from about 1,500 degrees to 300 degrees in just seconds. “That gives us an amazing amount of security” when firefighters enter the structure, Clay says.

While it may be safer for firefighters, such tactics have come up against another cultural hurdle. For many firefighters, flowing water from the safety of the exterior while potential victims could be threatened inside just doesn’t feel right. “There’s this idea that you’re not a real fireman unless you’re rushing into burning buildings,” says Kerber. “I hear guys say, ‘I didn’t sign up to shoot water through a window.’”

Clay says he’s been quick to stand up to the skeptics in his department. “Now we have the research—this is actual scientific proof about what’s happening and how we can best combat fire and protect people,” he says. “The macho part, the thrill of the fight where you come out of the building with your coat smoking, that’s taken away somewhat. But I tell my guys this is not about us—it’s about how we protect people and property and how quickly we take this threat away.”

Helping fire departments break away from old dogma and embrace the science that could save lives is what keeps Madrzykowski and Kerber motivated as they travel from stage to stage, airport to airport. “Some folks say it takes generations for a fire department to change,” Madrzykowski says. “I don’t agree with that at all.”
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