I’m pleased to introduce this edition of the FLETC Journal, which focuses on the timely theme of officer safety and wellness. In May 2015, the Federal Bureau of Investigation released preliminary statistics that showed 51 law enforcement officers were feloniously killed in the line of duty during 2014. Although there was a notable decrease in 2013, the annual average was still 64 officers killed between 1980 and 2014, underscoring the threats that officers face from violent offenders.

But we’re losing more law enforcement officers in the line of duty than these statistics suggest. In 2014, an additional 44 officers were killed accidentally, with well over half of them due to vehicle-related incidents. And we must also mention the 16 who died in just the first 6 months of 2015 from job-related illnesses such as heart attacks.

Given these discouraging statistics, what can we do to enhance officer safety and wellness? We asked contributors from a wide spectrum of disciplines to weigh in on this question, and they provided us with articles covering heart disease and its disproportionate impact on law enforcement officers, digital officer safety, stress and sleep deprivation, and the benefits of realistic and innovative training, to name a few.

Law enforcement is a profession that has always carried inherent risks, from the earliest days of our watchmen and constables. It’s unrealistic to think that we’ll ever have a year with no law enforcement officers killed in the line of duty, but we have an obligation to find ways to minimize the number of preventable deaths and improve officers’ wellness. And optimism is warranted, because many dedicated experts are focused on research, education, and training in these areas, with the collective goal of reducing the number of names added every year to law enforcement officer memorials. I’m proud of the role that FLETC and our partners are playing in these efforts.

Michael S. Milner
Assistant Director
Glynco Training Directorate
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what’s inside...
The FLETC Journal is a law enforcement training magazine produced and published by the Federal Law Enforcement Training Centers (FLETC). It is produced, published, and printed through a joint collaboration with the Protocol and Communications Office and the Government Printing Office. The printed circulation is 2,000 and it is also available electronically on the FLETC website at http://www.fletc.gov/about-fletc.

The content of this publication is written in accordance with the guidelines of the Associated Press (AP) style. Articles, photographs, and other contributions are welcomed from the law enforcement training community and academia. Publication depends on general topical interest as judged by the editorial team.
Q. What training has most prepared you for leadership?
Taking the DISC assessment in 2002 as part of a FLETC training for instructors and supervisors greatly influenced my leadership skills. The DISC is a behavior assessment tool that is based on the work of psychologist William Marston. It is designed to help people understand behavior preferences. After receiving the training, I realized it could help me not only at work, but in all my relationships. I believe in DISC so strongly that I became one of the first DISC and Situational Leadership instructors at FLETC. While on assignment at the International Law Enforcement Academy (ILEA) in Botswana, I utilized DISC training, and it remains one of the most requested leadership tools at the ILEAs. I recommend DISC training to all FLETC employees who have the opportunity to participate, so they can learn more about themselves and their colleagues.

Q. What is the most important thing a person needs to know about being a leader?
Effective leaders need self-awareness and knowledge of how others perceive them. I believe we all have unique skills and talents. Conversely, we also have idiosyncrasies and peculiar habits, many of which we are blissfully unaware. Because co-workers and friends are reluctant to share bad news, many of us go through life not knowing what specific behaviors create distance between ourselves and others. I have heard many conversations where people say, “He is a good guy, BUT he is an arrogant know-it-all,” or “She’s a hard worker, BUT she gossips and talks about people.” The “BUT” defines people. No matter how talented or hard working an individual is, building trusting and positive relationships with colleagues is necessary for leadership.

Q. Why do you think knowing your behavioral style is important in the work environment?
Problems can occur in relationships when we fail to meet each other’s expectations. When that happens, we often apply nefarious motives, when in fact it is just a behavioral tendency. Social folks can misinterpret a quieter person’s behavior as disinterest; independent workers may feel throttled by a more collaborative group. When we understand our behavioral preferences and those of our colleagues, we can adapt our own behavior and more generously interpret others’.
I have always provided my DISC report to my supervisors so they would know my behavior style and what makes me tick. I honestly think this has helped our relationships. By observing and listening to people over the years, I have gotten to know many people better by understanding them through the DISC lens.
“He who knows others is learned. He who knows himself is wise.” —Lao Tzu

DISC helps us learn more about ourselves and others and use that information to create positive interpersonal relationships. The DISC assessment also predicts how individuals would likely react in specific team, management, or leadership situations given their DISC styles. We all know folks who come in and just talk and talk while we are trying to work, or people who like to work by themselves and not in groups, or those who like to speak or don’t like to speak in groups. DISC describes the origins of those behaviors. It even explains why some people have messy desks and others do not. DISC provides information about these behavioral preferences so that we can understand others and develop better relationships at home and at work.

Q. How many behavioral styles are discussed in the DISC assessment training and which styles align with yours?

There are four Primary Behavioral Styles in the DISC model, and I am a “D” type personality. We all have some characteristics of each style, but rely primarily on one. Environment matters; some act one way at home and another way at work. FLETC leadership instructors teach these characteristics all over the world and believe me—they are making a big difference in the lives of the students everywhere FLETC trains.

**Dominance Style—(Driver)** Task-oriented extroverts who can put on the heat, may be quick to anger, direct, blunt, get right to the bottom line. D’s like variety, challenge, new opportunities, making their own decisions, to be in charge, little or no supervision, change, freedom, going straight to the bottom line. D’s don’t like being questioned or challenged, can’t-do attitudes, routine tasks, appearing weak or soft, or beating around the bush.

**Influence Style—(Socializer)** People-oriented extroverts who are optimistic, friendly, spread sunshine to others. I’s like talking, brainstorming, recognition, positive feedback, frequent interaction with people, a fun work environment, activity, socializing, quick decisions, and action. I’s don’t like negative people, picky people, tedious work, disapproval from others, lots of details, working alone, inflexibility, rules, and restrictions.

**Supportive Style—(Relater)** People-oriented introverts who provide stability and support to the rest of the team. S’s like being appreciated, clearly defined responsibilities, job security, an orderly and predictable work environment, harmony, and personal privacy. S’s don’t like change, lack of management support, aggressive and pushy people, competition, conflict, confrontation, pressure, disorganization, or deadlines.

**Compliance Style—(Analyzer)** Task-oriented introverts who are cool, unemotional, and analytical. C’s like to work alone without distractions and interruptions, low-risk decisions, the time and resources to do the job right, facts, logic, objectivity, adherence to rules, procedures, and standards. C’s don’t like dealing with emotionally-charged issues, sloppiness, carelessness, small-talk, mandatory socializing, projects with unpredictable outcomes, and changing rules and expectations.

(Descriptions are from DISC Training Workshops at: http://www.disctrainingworkshops.com/)

Q. What type of person irritates you the most as a leader?

There will always be someone who is a problem and causes extra work, primarily due to his or her attitude. Sadly, we seem to all know who they are. I think an employee or a supervisor who is rude, insensitive to his or her colleagues, toxic to other folks, or is a mean-spirited bully should be dealt with immediately. Initially, it can seem
easier to allow these folks to go unchallenged. In the end, this causes additional problems, both emotionally and professionally to the staff and financially to the organization. If they aren’t dealt with quickly and appropriately, they eventually lower employee morale. A successful leader identifies and quickly addresses destructive behaviors and does not become a part of the problem. Employees appreciate it when supervisors act, and the organization is better off for it.

Q. Do you have a favorite leadership book?

I have several, but Lincoln on Leadership: Executive Strategies for Tough Times by Donald T. Phillips is near the top. This unique book provides a management course through the historical lens of Lincoln during the Civil War. Lincoln’s philosophy on leadership and fighting tough battles in work and life are still valuable. The very first chapter describes Lincoln’s inclination to get out of the office to find out what was really going on. This is a habit many managers could use today. Anyone who wants to improve their leadership skills would benefit from reading the book. Two of my favorite quotes are: “Be with a leader when he is right, stay with him when he is still right, but, leave him when he is wrong,” and one that is so true in my life, “I’m a success today because I had a friend who believed in me and I didn’t have the heart to let him down.”

Q. Why do you think international engagements are important to the FLETC mission?

While FLETC’s first mandate will always be training federal law enforcement, we recognize the interconnectivity between our mission and the goals of domestic and foreign law enforcement. Leadership training and capacity building are two areas in which we can actively engage with the international law enforcement community. The transnational nature of the criminal forces we face and the threat they pose to our society require that we work closely together. We must engage in the best practices available, train using the newest methodologies and technologies available, and develop and review strategic plans in order to adjust to evolving demands.

Q. How does the leadership training your division provides in the international arena support the DHS mission and the US Government interests?

The Department of Homeland Security’s international blueprint calls for building and improving existing international partnerships to better identify vulnerabilities and work with those partners to understand, investigate, and interdict threats or hazards at the earliest possible point—ideally before they emerge as direct threats to the homeland, reach U.S. shores, or disrupt the critical networks on which the United States depends. Our ability to effectively network through robust partnerships and operational integration—within DHS, across the enterprise, and with our international partners—is critical to our mission success.

J.O. Smith currently serves as Chief of the Physical Techniques Division. He also served as the Chief of Forensics and Investigative Technologies Division and the Driver and Marine Division before being assigned as the Director of the International Law Enforcement Academy (ILEA) in Gaborone, Botswana, for five years. He returned to FLETC Glynco in December 2014. J.O. has received many awards for his leadership and local community service.
FORGING PARTNERSHIPS:
FLETC PILOTS PRIVATE/PUBLIC PARTNERSHIP ACADEMY
Shopping centers are part and parcel of our American way of life. People see them not only as places to purchase the items they need and desire, but also as venues for recreation, leisure, and entertainment. While we visit them typically without much thought to what could go wrong, there are private security professionals and local law enforcement officers engaged each day in ensuring both mall security and our safety. Their success in doing so depends on coordination and an understanding of each other’s roles.

Since the Department of Homeland Security’s (DHS) inception following the September 11, 2001, terrorist attacks, evolving threats have underscored the significance of the private sector to the homeland security enterprise. Over 85% of our Nation’s critical infrastructure is privately owned, and DHS has embraced the criticality of collaborating with the private sector in all phases of preparing for, responding to, and recovering from large scale incidents. The 2014 Quadrennial Homeland Security Review identifies strengthening the execution of DHS missions through public-private partnerships as one of the Department’s strategic priorities.

Throughout its 45 year history, FLETC has embraced the power of partnerships in developing and delivering high quality law enforcement training. As a component of DHS, FLETC recognizes the need for law enforcement and the private sector to work together in support of safety and security, and the critical role training can play in improving coordination between the two sectors. To this end, FLETC collaborated this past spring with the DHS National Protection and Programs Directorate and private sector stakeholders in the commercial facilities field to pilot the inaugural FLETC Private-Public Partnership Academy (PPPA) at FLETC’s headquarters in Glynco, Georgia. Leaders from Simon Property Group, the largest shopping mall operator in the United States, represented the private sector in planning this event, with participants from other companies attending the training.

“I believe, to meet the challenges of securing our Nation and building resilience in this fast-paced, ever changing, threat environment, our mission is best served as a shared responsibility—shared by federal, state, local, tribal, and territorial governments, private sector companies, non-profit organizations, communities, and individual citizens.”

—DHS Secretary Jeh Johnson

Senior Instructor Chris Corall burns a commercial safety fuse to acquaint students with characteristic fuming and odor during a block of training on Improvised Explosive Devices at the inaugural Private/Public Partnership Academy.
On June 1, 2015, nearly 175 mall executives, mall security directors, and local law enforcement officers and leaders gathered to participate in this first-of-its-kind training event at FLETC. The goal was to bring together these three groups that form the foundation of shopping center security to participate in training pertinent to securing public venues, with a broader goal of improving coordination, security, and resiliency across traditional public and private sector areas of responsibility. One of FLETC’s founding principles is that collaboration in training leads to more effective law enforcement operations. Bringing together private sector security providers, mall executives, and local law enforcement personnel for joint training was a natural evolution of FLETC’s commitment to collaboration across the comprehensive homeland security and public safety communities.

As FLETC, NPPD, and Simon Property Group planned the training components of the first PPPA, they thought carefully about which topics would apply to all segments of the intended audience, and specifically how they could tailor the training to address each group’s roles and responsibilities in securing commercial facilities. The outcome was two days of training in a variety of topics, including terrorism awareness, weapons of mass destruction, improvised explosive devices, leadership in a crisis, special event security planning, tactical medical, and simulated firearms familiarization.

Although FLETC delivers training in these topics every day to our Nation’s law enforcement officers, this was the first time the audience included both the public and private sectors. Participants ran the gamut from those with corporate responsibilities and no law enforcement experience to those serving as chiefs of police with no corporate experience. This created a particular challenge for FLETC to tailor the training sessions to meet the needs of all participants. The key was focusing on roles and responsibilities, so that regardless of their level of content knowledge, both groups came away with an understanding of how they could work across traditional boundaries to effectively keep their facilities and customers safe.

FLETC’s Counterterrorism Division Chief Martin Roddini, who played a key role in planning the training, observed, “Although FLETC trains people with various levels of law enforcement experience, this audience had the largest variance in background, experience, and most importantly, their roles and responsibilities outside the fence line. Thus, to be effective, each block needed to address the varying missions, roles, and responsibilities of this unique audience.” Confirming the significance of tailoring the training sessions to focus on roles and responsibilities, another FLETC PPPA planner observed, “What behavior changes now? Do they communicate more than they did? That’s more the point than the individual training topics. I think they will communicate more than they did. Now they know what they don’t know.”

The various training sessions served as building blocks leading up to a final practical exercise, during which the four groups participated in a competition to identify threat indicators during a large-scale event. To ensure
realism, the final exercise took place during a FLETC-wide event that was open to all FLETC and Partner Organization staff. The goal was to replicate the kind of event open to the public that might occur at a shopping venue. FLETC therefore coupled this exercise with its inaugural Partner Appreciation Day, and held a Car, Truck, and Motorcycle Show to serve as the focal point for the event. The PPPA planners intentionally ensured the teams comprised a mixture of public and private sector personnel, offering the valuable experience of working with their counterparts during a pragmatic exercise.

FLETC’s Counterterrorism Division staff collaborated with NPPD’s Federal Protective Service to inject simulated “threats” into the event. For example, they staged threats such as a suspicious package, a person wearing unseasonable clothing, a role player posing as a political candidate handing out literature indicative of his association with domestic terrorism, an abandoned vehicle with suspicious materials inside it, and a role player conducting video surveillance of the event with a smart phone. Participants worked with their teams to identify as many threat indicators as they could. After the event, FLETC instructors led them through a de-briefing during which they discussed what they had seen and what their responsibilities would be during an actual event. Following the PPPA, participants shared feedback on the value of this exercise. One law enforcement participant stated, “This was one of the more thorough and realistic scenario-based exercises I have been a part of in 18 years of law enforcement. The exercise put you into a real atmosphere of a crowded situation with high to moderate level of tension. The ebb and flow of what to expect was great.” Another noted that the final event provided an opportunity to draw from the information the instructors had imparted during the training sessions, and also observed, “It was a great opportunity to work with others.”

FLETC staff who participated in the planning and execution of the PPPA identified important benefits to both public and officer safety. FLETC Assistant Director Valerie Atkins noted, “The PPPA attendees confirmed that the private sector is very eager and willing to embrace their role...
providing safe environments for their visiting public, and they value these learning experiences and the collaboration with public safety officials. The interest in this training will definitely help create safer venues.” Chief Roddini observed that the PPPA participants can now become force multipliers in the deterrence and detection of crime. He remarked, “They effectively have become trained observers not only during these special events but also during their day-to-day activities. They now know what to look for, their response, and the effects as they relate to improvised explosive devices, vehicle-borne improvised explosive devices, and weapons of mass destruction.”

Even for those law enforcement participants with many years of experience, the uniqueness of training in concert with private sector partners was extremely valuable. One municipal law enforcement participant observed, “As a law enforcement person with 29 years of experience, most of this was not new information. However, when I shifted gears and realized this was the catalyst to talk more in depth with our private partners and know where their base of knowledge comes from, it is an excellent platform to build on and discuss continuous training concepts. This is a valuable training opportunity.”

The PPPA addressed the sometimes competing but often intersecting interests of business and public safety. For example, during the training block on special event planning, a FLETC instructor pointed out that the general manager of the mall does not have the same mission or possess the exact same concerns as the director of security and/or law enforcement. One mall executive who attended the PPPA observed the effectiveness of the program in addressing this potential conflict, stating, “The instructors did a phenomenal job of focusing the material toward our areas of responsibility. Everything was tailored to fit our needs. The hands-on approach enabled us to understand the private/public relationship dynamics...the
session on special event planning was helpful and allowed me to understand the different viewpoints needed to prepare accurately.” Similarly, one law enforcement PPPA participant reflected, “It was enlightening for me to see what is important to the private sector.”

In addition to imparting information on the private and public sectors’ differing roles in support of improved coordination, the PPPA also aimed to underscore their collective responsibility in ensuring safety and security. One mall executive commented, “I was struck with the true responsibility that we all have to be prepared to jump in to save lives if the occasion arises.” A local law enforcement PPPA participant observed that the central message of “communication and knowing your role” with any operation “will possibly save lives.”

Looking to the future, FLETC is reflecting on how it can replicate this experience for additional private and public sector stakeholders, potentially in other subsectors besides commercial facilities. FLETC’s brand statement is “Training Excellence Through Partnerships.” The inaugural PPPA enabled FLETC to concretely incorporate the private sector into the work it does every day to ensure our Nation’s law enforcement officers are well-prepared to perform their often dangerous roles. As a FLETC trainer observed after the PPPA, “This is pushing FLETC to look at how we’re doing our business. Law enforcement does not operate in a vacuum. How do we integrate others, like emergency services, the private sector, etc.?”

FLETC Director Connie Patrick summed up FLETC’s commitment to the role of training in forging private and public sector collaboration. She stated, “As professionals in the law enforcement and security fields, we know that it is never just one agency responsible for prevention, mitigation, and response. We also know that because we live in a free and open society, we cannot just harden facilities in order to protect them. We must proactively train and collaborate across the public and private sectors to work as a team to mitigate, prevent, and respond to threats.” FLETC looks forward to continued collaboration with private sector stakeholders to promote coordination and safety through training.

“**We must proactively train and collaborate across the public and private sectors to work as a team to mitigate, prevent and respond to threats.**”

—Connie Patrick, Director, FLETC

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**JENNIFER TOCCO** began her civil service career in 2008 and currently serves as a management and program analyst in the Director’s Office. She previously held positions in the Office of State and Local Training and the Rural Policing Institute. Prior to moving to Georgia, Ms. Tocco worked in the nonprofit and academic sectors. While completing her graduate studies, she served as a research fellow at the Rutgers Graduate School of Education’s Center for Educational Policy Analysis. She holds a Bachelor of Arts with a double major in political science and history from Drew University, a Master of Education degree with a focus on educational policy and qualitative research methods from Rutgers University, and a Master of Public Administration degree from Valdosta State University. She also completed all doctoral coursework in educational policy while at Rutgers.
By Preston Farley

With the widespread public adoption of digital technology, the law enforcement landscape has changed drastically in the past few decades, along with every other segment of society. This article aims to explore the similarities and differences between traditional law enforcement officer mental trauma and the new type of trauma ushered in by the investigation of the criminal use of digital technology to facilitate child exploitation. This article will focus on the law enforcement professional, not the suspects or victims of this horrific type of crime.

**Critical Incidents**

On February 15, 2011, as Special Agent Jaime Zapata and his partner were driving on a highway in Mexico in support of a U.S. Immigration and Customs Enforcement (ICE) mission, Mexican drug cartel members ambushed and shot them. His partner was shot in the legs and survived, but Special Agent Zapata eventually succumbed to multiple gun shots.

A 15-year veteran of U.S. federal investigations didn’t show up for work one day. His boss became concerned when he didn’t answer his home or cell phone. Eventually, a patrol was dispatched to his house and discovered an apparent suicide scene. The suicide note said, “I can’t take the work anymore.” For five years, this federal officer had been assigned to a child exploitation imagery analysis unit where he apparently became traumatized by the images he processed every day.

The first death described above made the national news, but the second one was not even a blip in the national media. While both deaths were equally tragic and the

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1 The agent depicted is a composite of multiple persons/events and is presented for demonstration purposes due to privacy concerns. Any similarity to unique people and events is accidental and unintentional.
public lost dedicated officers in both instances, the second kind of death may occur far more frequently until law enforcement makes a seismic shift in the treatment of its officers’ mental health needs.

Short History of Research

The history of pornography is probably as old as that of mankind itself. As we have mastered new communication technologies, so have those who traffic in pornography. From the erotic art on the walls of brothels in Pompeii, to Gutenberg’s invention of the printing press that brought pornography to paper, to the current binary format on computers all over the world, pornography has always had its impact. Along with adult pornography came a smaller segment that we referred to as child pornography, or what we now call child sexual exploitation (CSE) material. As the Internet came to the forefront in the modern world and everyone became connected virtually, those who traffic in CSE began to multiply online.

The Internet was already an established CSE vector when I began my career in law enforcement in the middle 1990s. And with the proliferation of CSE material came a need to investigate it. Law enforcement began to form investigative teams focused on computer crime, and rapidly discovered that the largest part of these investigations would be focused on CSE because it was so prolific. As more and more law enforcement officers were trained in this discipline, it became apparent that CSE material did not only victimize the children, but also had a negative impact on those who dedicated their careers to seeking justice for them. Anecdotally, those in the business would hear of computer examiners who just quit one day because “they just had enough.”

Obviously, there was something affecting these officers differently than other types of police work. In the early 2000s, pioneering research...
began to attempt to identify the particular stressors on officers who spend their days investigating CSE material. As with any new endeavor, it takes time to gather enough data to begin formulating scientific theories. As of 2015, there is a lot of research literature and a great deal of actual field experience in dealing with the vicarious victims of CSE material, i.e., law enforcement officers responsible for investigating this type of criminal activity.

Kenneth Middleton, Ph.D., Peer Support Clinical Advisor for ICE, has been in the mental health field since 1989. I recently interviewed Dr. Middleton, and he relayed the latest finding on Secondary Traumatic Stress Disorder and related illnesses’ triggers and effects with respect to law enforcement officers. Dr. Middleton has spent a considerable amount of time researching cause and effect of Post-Traumatic Stress Disorder for law enforcement, and specifically, identification, inoculation, hygiene, and treatment for those afflicted.

Impact of Secondary Traumatic Stress

When a traumatic event occurs to one officer in an organization, it affects everyone else in that organization to varying degrees. In the example of Special Agent Zapata above, his death was traumatic, but the timing and scope of his untimely death were finite. Everyone involved could pinpoint the specific time and circumstances of this tragedy. Dr. Middleton explained that this type of mental trauma is akin to touching a burner on a stove. It is very easy to quantify when, where, and how you got this type of injury and to observe the negative impact. The symptoms and treatment for this type of injury are well known.

With CSE investigations, it is much different. Unlike touching a very hot object and forming a burn blister immediately, CSE investigators get something more like a sunburn. Metaphorically, the agent may put on sunblock, wear long sleeves, and stand under an umbrella all day with just short forays into the water, but when he gets home that evening, he finds that he has received a bad sunburn anyway. He doesn’t know the precise minute in the sun that pushed him over the edge into a burn; he only knows he has been burned at some point.

Dr. Middleton described three pitfalls common for CSE investigators who have gotten “burned,” which is technically known as Secondary Traumatic Stress Disorder.

1. The first type of trauma is burnout. Investigators are happy to go to work every day until one day they are not. They were very energized to get into the field and help to put perpetrators behind bars, but one day the “sunburn” hurts too much and they do not feel they can go on. Dr. Middleton stated that this most often occurs with agents who do not perceive that they have the necessary organizational support for their work. Either their supervisors do not understand the work, or attorneys are not taking their cases, or they do not have sufficient equipment. So burnout occurs when agents feel they know what to do, but do not have the proper tools and/or support.

2. The second type of pitfall for CSE investigators is called compassion fatigue. This happens when agents begin to focus too much on the victims. An agent may look at an image of a victim who is being posed but does not realize it. Investigators need to make a very quick decision regarding whether this is illegal or not. The problem comes when the agent takes an extra second to try to tell himself the story of how the child was placed into that position. If the agent begins to connect with the victim, he may feel compassion fatigue. To clinicians, this looks like the actual signs of Post-Traumatic Stress Disorder. The agents experience hyper-arousal and do not sleep well. When they dream, they dream about saving victims. They have a heightened startle response and their digestion does not work well. This is classic Post-Traumatic Stress Disorder symptomology.

3. The final type of pitfall routinely observed in CSE investigators is vicarious trauma. The agents are traumatized when they see the trauma of others. The difference from compassion fatigue is that the agents begin to focus on the perpetrators. They tend to think, “I know what a perpetrator looks like.” They go grocery shopping and start looking at every man in the store with his daughter.
When she asks for ice-cream, her father pats her on the back and says “Yes, you can have some ice-cream,” and the agent who has vicarious trauma thinks, “That guy is raping his daughter.” Agents start to view the world as if everybody is evil.

Obstacles

One of the toughest issues associated with this type of trauma is identifying it, because investigators do not know they are getting “burned.” The process is slow and builds up over time for most people. The investigator’s behavior begins to change but he does not see it. Someone close to him sees it and then brings it to his attention. He is doing the work, and then suddenly his spouse says, “Why are you treating our daughter differently?” He responds, “Well, I don’t want to be accused of anything.” “But you’ve been acting one way with her for 11 years and now she’s 12 and you are treating her differently. You’ve changed.”

A second obstacle is institutional and social stigma. In agencies where a security clearance is required, disclosure of seeing a mental health practitioner is sometimes perceived as a career killer. And among one’s peers, any sign of weakness might be mocked and amplified throughout the organization. These two factors are a huge pressure point for many people who recognize that they need some type of assistance, but the cost outweighs the benefits in their minds.

Overcoming Obstacles

Over the years as more data have been aggregated concerning the issues of critical incident response and Secondary Traumatic Stress Disorder treatment, institutional stigma is crumbling in many organizations. In Dr. Middleton’s organization, ICE management has instituted one of the most comprehensive and forward thinking treatment regimens in the United States law enforcement community. Every ICE office either currently has or will have a specially trained peer support officer on staff. It has implemented mandatory group meetings every quarter. Wellness coordinators run these meetings, getting everyone away from their desks and into an environment where they can safely talk about how the work has affected them personally and reconnect with their peers.

Having implemented these remedies only in 2013, there is scant evidence of their effectiveness yet. However, as of this writing, ICE has certified 138 peer-support practitioners. These practitioners have cumulatively reported spending hundreds of man-hours assisting their co-workers with various stressors in their capacities as law enforcement officers. One of the cornerstones of the ICE Peer Support Program is anonymity.
This is a requirement to ensure the agents feel safe enough to be frank and completely open to the peer support practitioner. This is great for the program participants, but makes obtaining accurate metrics difficult. Overall, the program should assist in making happier, healthier employees who take fewer sick days, and should reduce staff turnover.

Law enforcement agencies around the globe are facing the same issues with respect to CSE material investigators. While cultural norms differ around the world, there is an almost universal consensus regarding the taboo of child sexual abuse. Therefore, investigators combatting this particular crime in other countries experience the same problems as American investigators. To that end, the Virtual Global Taskforce has been established to comprehensively address these issues globally. Visit http://www.virtualglobaltaskforce.com/ for additional information.

As this field matures, we should expect more research and even better services for officers involved in CSE material investigations. Until then, the most important thing investigators working in this field can do is not bottle up the feelings this type of work will generate. Find a friend or a peer support specialist and talk about it.

PRESTON FARLEY is a senior instructor for the Cyber Division at FLETC, where he has been an instructor since 2004. In 2006, he became the program coordinator for the Seized Computer Evidence Recovery Specialist Training Program, which is the introductory digital forensic analysis class open to all law enforcement officers/agents at both the local and federal levels. His law enforcement career includes 20 years as a United States military member in both the active duty U.S. Air Force and the active duty U.S. Army culminating in nearly a decade of investigative experience with the United States Army Criminal Investigation Division Command as a special agent and cyber agent.
A GOOD KIND OF T.H.R.E.A.T.

Increasing Survivability During Mass Casualty Events

By Charles Brewer

On April 15, 2013, at 2:49 p.m. thousands of runners and hundreds of thousands of spectators were participating in the Boston Marathon when two pressure cooker bombs exploded, ending the lives of three people and maiming over 260 others. The authorities’ response was unprecedented in the annals of U.S. law enforcement history. Due to the ubiquity of surveillance and mobile phone cameras, the suspected attackers were identified and their photographs were released to the public that very day. What is not generally known outside of first responder agencies is that communication problems still remain between police, fire, and emergency medical services (EMS) agencies when responding to mass casualty events. This has had the negative consequences of prolonged chaos, increased response times, and ultimately unnecessary pain and suffering for the injured. Fortunately, there is a solution.

Intense media attention to mass casualty events in the United States has resulted in a renewed focus on improving
survivability during these events, not only for the intended victims, but also for the responding police, fire, and EMS personnel. On April 2, 2013, and again on July 11, 2013, a group of public agency organizations known as the Hartford Consensus convened in Hartford, Connecticut, to develop strategies for increasing survivability during these events.

Additionally, on February 5-6, 2014, the Department of Homeland Security (DHS) Office of Health Affairs held a stakeholder engagement meeting to facilitate discussion among subject matter experts from federal, state, and local agencies. The results of each of these meetings were similar, that we must develop policies to better integrate responding agencies through increased interoperability. Doing this would allow responding agencies to work within a common framework, while continuing to focus on their agency specific missions. While fire and EMS responders commonly use the National Incident Management System and the Incident Command System, law enforcement does not typically use them during the initial response. However, the law enforcement response is usually integrated as the National Incident Management System and the Incident Command System are activated.

It is well documented that most deaths from penetrating trauma result from blood loss. We also know the typical response to mass casualty events has not been optimally aligned to maximize survivability. Historically, initial response has been focused on threat neutralization. This should, and will, remain the focus. However, there are combat-proven techniques that can be integrated into the response that will greatly increase survivability of victims and any injured responders. This integration will achieve multiple objectives simultaneously. One such technique/tactic is the implementation of the Tactical Combat
Casualty Care principles. When implemented with strong support, this program has resulted in dramatic reductions in preventable deaths. The Hartford Consensus recommended an integrated response containing the critical actions contained in the acronym **THREAT**: 

- **T**hreat suppression
- **H**emorrhage control
- **R**apid *Extrication* to safety
- **A**ssessment by medical providers
- **T**ransport to definitive care

When utilized properly, **THREAT** requires cooperation among all initial responding agencies (police, fire, and EMS). The recognition of the need for increased interoperability and the implementation of true interoperability are two very distinct things. While virtually everyone agrees on the need, not everyone can develop or has developed a plan for successful integration. Differing policies among agencies often hampers implementing an integrated response.

With law enforcement agencies adopting new techniques and tactics for responding to mass casualty events and the traditional fire/EMS approach of waiting until the scene is secured, it is virtually impossible to fully integrate a response. The introduction of the Tactical Combat Casualty Care concepts to street level police officers, including self-aid and buddy-care, has increased the survivability of the initial responding officers. There has also been a recent shift in traditional EMS response, with the utilization of additional law enforcement resources to allow EMS access to the “warm zone,” which allows for additional medical evaluation/treatment that would otherwise be delayed.

The obvious question prior to implementing any of the above tactics is, “How do we do it?” Unfortunately, during the event is not the time to answer that question. Ensuring proper implementation should be an ongoing process. Senior level leadership among the initial responding agencies should meet to develop policies and procedures that consider the entire response, not just their agencies’
responses. Agencies should put these policies in place and utilize them during table top exercises and during departmental/agency training sessions. Training sessions should involve all responding agencies, not just the evolution “owner.” Doing so will also allow responders to get to know each other and to develop professional relationships. This will make communication easier during an emergency.

Finally, perhaps the most important factor is training. This includes specific training on techniques and tactics, and also on policies. This training should be done both intra-agency and inter-agency. There are numerous examples of one agency responding with exceptional training and polices, but other responding agencies lacking clarity on their roles. This creates conflict when multiple agencies are trying to work together to respond. Providing joint training opportunities can eliminate most of this confusion, especially for agencies sharing a geographical location or where mutual aid agreements exist.

FLETC has developed the Basic Tactical Medical Training Program (BTMTP) to deliver this type of training. The BTMTP is a 24-hour training program focusing on the Tactical Combat Casualty Care principles as applied to civilian law enforcement. FLETC delivers this program across the country to federal, state, and local agencies in an attempt to align jurisdictions on this topic. Fire and EMS providers routinely attend the BTMTP, which local police agencies sponsor, in an attempt to better integrate into the response network. This training provides hands-on scenario practice to prepare agencies for an integrated and cooperative response during mass casualty events.

There are many other considerations before implementing this type of approach, such as appropriate medical training and use of ballistic protection for EMS. However, with the prevalence of mass casualty events in the United States, public safety agencies must begin considering an integrated response approach. Doing so will increase the survivability of first responders and civilian victims of mass casualty events.

A link to information about the BTMTP is https://www.fletc.gov/training-program/basic-tactical-medical-training-program.

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By Greg King

Digital Officer Safety is crucial training for any member of the law enforcement community. The reason for this is simple: Law enforcement officers must understand that what is available about them online can be used against them. The primary goal of Digital Officer Safety is teaching officers to take steps to reduce the personal and professional operational risks associated with online activity and having an operational security plan in place at the beginning of investigative activity.

The concepts and need for Digital Officer Safety arose from an understanding that law breakers have always been interested in ways to predict, intercept, and thwart police action against them. This requires an understanding of police concepts and identification of investigative and operational weaknesses. A criminal who understands these investigative and operational weaknesses can exploit them.

Example after example has been shared throughout the law enforcement community detailing the ways LEOs have become vulnerable to online resources.

Two New York City Police Department (NYPD) police officers sitting in their vehicle were gunned down by a suspect who posted anti-police rhetoric and threats to law enforcement on social network sites. The subject used an application called Waze to target his victims. Waze identifies in real time the location of on-duty police officers. Prior to the attack, the NYPD sergeants’ union sent a letter to Google requesting it discontinue the Waze app. The union feared this app could lead to the targeting and killing of NYPD police officers.

The Department of Defense and the U.S. Army alerted service members after discovering a hit list on a social media website used by the Islamic State. These 100 members of the armed forces were notified that the Islamist State had threatened to kill them and members of their family. The group that posted the information identified itself as the Islamic State Hacking Division. The online list featured photographs of service members along with their names, ranks, and home addresses. This information was publicly available and did not come from a data breach. In many cases, the troops’ identities are on military websites and their social media pages such as Facebook, Twitter, and Instagram.
In December 2014, the Open Source Intelligence Center sent information to its members informing them that key members of the Islamic State had closed their Twitter accounts because various governments were using their accounts to monitor and track them.

Just as law enforcement can use online content to track extremists online, extremists can likewise track law enforcement targets the same way. There are a number of ways to reduce exposure, all of which require a law enforcement officer to be proactive. It begins with law enforcement officers gaining an understanding for how much data could be out there about them, both personally and professionally. The first step is to list all the sites that may have information relating to a law enforcement officer and his or her family members. These sites include but are not limited to agency websites and directories, church websites, group or affiliation sites, professional association sites, and social media sites. After listing these sites, the next step is to systematically search them to determine whether it is necessary to list personal information on these sites and if the sites serve a purpose. Law enforcement officers should do the same thing with members of their immediate families. They should ask them what social media sites contain their personal information, and in the case of children, reach an agreement to elicit truthful responses while trying not to judge. Once information is located, law enforcement officers should determine if this information could be used against them or their family members, and then start the process of opting out of all the sites they wish to be removed from. Most sites have opt-out options associated with their “privacy” statements. This is a labor intensive task and was designed to discourage attempts at removing information. This information is a source of revenue for these sites and others like them. It is important to remember that the removal of data is retroactive, so it is a continual process that will have to be repeated due to the continual accumulation of data by online entities.

As outlined above, both domestic and foreign enemies are using social media in ways that are harmful to law enforcement. They seek trophies and incidents that can be used as propaganda and recruitment tools. Our enemies have been using social media in ways that are harmful to law enforcement. They seek trophies and incidents that can be used as propaganda and recruitment tools. Our enemies have been using social media in ways that are harmful to law enforcement.

The new information-rich environments have changed how law enforcement operates and how officers conduct their personal lives. It has presented new investigative avenues and access to data that were unimaginable a short while ago. It has also made locating members of all segments of society much easier. Applying the techniques and practices of Digital Officer Safety will help close some of the information security holes associated with everyday activity. It is also one step in protecting officers and their families. Officers must understand the operational risks associated with online investigative functions.

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GREG KING is currently a senior instructor and program coordinator with the Financial Fraud and Investigative Analysis Branch, Investigative Operations Division, Federal Law Enforcement Training Centers, Department of Homeland Security. He is the program coordinator for the Case Organization and Presentation Training Program, the Internet Investigations Training Program and the assistant program coordinator for the Intelligence Analyst Training Program. As program coordinator, Greg is responsible for research and development of course material, lesson plans and testing. He also provides technical support for prior students and partner organizations.

Prior to joining FLETC, Greg was employed as a sworn peace officer with the Cleveland Police Department, in Cleveland, Ohio, for almost 28 years and has a total of 33 years of law enforcement experience. Greg’s assignments included undercover Street Crimes Unit Detective, Sex Crimes/Child Abuse Detective, Financial Crimes Detective, Homicide Detective and Intelligence Detective and Analyst. As a member of the Intelligence Unit, Greg was also assigned to the Ohio Internet Crimes Against Children Task Force as a certified forensic examiner. While assigned to the task force, he conducted forensic examinations involving tens of terabytes of data involving a wide range of criminal offenses. Greg has been qualified as an expert witness in local, state and federal courts.

Greg is a computer forensics examiner and is a member of the High Tech Crime Investigators Association.
By Bruce Miller

It is a cool damp morning in rural America. You have just come on duty, and decide to stop and grab a cup of coffee. While waiting for the cashier to ring up your purchase, your radio echoes into the silence, “All units respond to a call of shots fired at Smithville High School.”* You race to get to your car because you are the only unit within a quick response area. You arrive on the scene, and there is already chaos. People are fleeing the building, and you hear screaming and gunfire from inside the building. You get out of your car, hurry to the door, and enter the building. Thoughts race through your head. Are you prepared? Can you recall your training? And most prevalent, was your training adequate?

In the current environment and considering the proliferation of acts of violence officers are witnessing, it is paramount we make training as realistic as possible. There has never been the level of scrutiny on officers’ actions and responses as there is today. The roles of law enforcement are changing, and acts of terrorism are becoming more prevalent every day in our country and around the world. We, as trainers, must provide officers with realistic training and scenarios to prepare them for their roles in the ever evolving climate they are operating in. We must keep training and practical exercises updated to reflect current events, and must anticipate future events as well.

Placing students in realistic scenarios, based on solid research, allows them the best chance for survival and success when they face similar situations in the field. While developing scenarios and training exercises, we must consider historical events and the laws that govern our responses. Building unrealistic and unwinnable scenarios creates training scars, and this is never beneficial to the student. Agencies routinely require requalification with firearms, but officers...
seldom receive follow-on training to accurately articulate their decisions to use reasonable force. Failing to reinforce the force options and articulation skills places the officer in an unenviable and unfortunate situation. As trainers, we can avoid this by instituting simple formal training scenarios or roll call trainings that reinforce the proper use of force and allow officers to effectively articulate their decisions. This builds consistency and confidence.

Active shooter events have no geographical limitations. All officers should be properly trained in the response techniques for these types of situations. In doing this, we must look at the daily duties of the officer or agent and the operating environments in which they perform. Departments in some areas of the country may have the luxury of two to four people responding quickly and simultaneously. In more rural environments, back-up can be a long way away, and a single officer may need to respond to neutralize the threat and prevent further loss of life. What this tells trainers is we must train for the worst case scenario, as well as the optimum response. In the current FLETC active shooter training programs, we utilize multiple scenarios with multiple response options. Some scenarios are designed to reinforce single officer tactics; others are designed to stress link-up drills and prevention of blue-on-blue accidental violence. FLETC has integrated these concepts to meet the needs of its varied partners from jurisdictions across America.

FLETC has received feedback on the success of its approach firsthand from graduates of the active shooter programs, six of whom have shared testimonials of how they helped terminate active shooter events. In September 2013, officers and agents from multiple jurisdictions converged on the Washington Naval Yard in response to shots fired in Building 197. Four were graduates of the FLETC active shooter programs. United States Park Police (USPP) Officer Andrew Wong stated that after making entry into Building 197, “I looked over my shoulder and saw a deceased person on the ground, and I remember thinking to myself, `Boy, this feels an awful lot like a training scenario.’ I knew in my mind it wasn’t, but it felt like I was doing another scenario.”

Naval Criminal Investigative Service Special Agent Jack Rasmussen also responded that day. Agent Rasmussen stated, “Approximately two years before the incident I had gone through the active shooter instructor training program down at FLETC, and I thought the final exercise where they had the role players in various stages of moulage and screaming, and
the noise and the chaos, really lent itself to what I dealt with on the day of the shooting.” USPP Officer Carl Hiott credited his response to the realistic training he received at FLETC. He remarked on how easily overwhelmed he could have been by the cries for help and obvious needs of those left in the wake of the shooter. He stated, “Our training through FLETC has been that during any kind of active shooter situation, if shots are being fired, to respond directly and get into the area where the shooter is. I ran into the building, met up at the corner with a couple of other officers, and we immediately made entry into the northeast corner of the building. A lot of your natural inclination is to stop and help these people...so as hard as it was to pass those people, the training is what helped us do that and get to the threat rather than take our time and possibly let him do more damage.”

Referencing the link-up training and blue-on-blue emphasis, Special Agent Gerry Arena of the Bureau of Alcohol, Tobacco, Firearms and Explosives, stated, “There was a tremendous law enforcement response from federal, state, and local law enforcement in building 197 that day. And the simple fact that there was not one incident of a blue-on-blue, and when I say blue-on-blue I mean one officer engaging another officer in gunfire, in that building during the entire time that building was being searched and cleared, is a testament to the training the individual officers and their agencies have received and the tremendous discipline everyone displayed that day.”

These type of testimonies demonstrate how training can prevent responding officers from becoming overwhelmed by the carnage and chaos of the evolving scene in front of them. We owe it to the brave men and women who protect this great Nation to provide them the most realistic and timely training possible. We should constantly assess our training programs to ensure they are current and relevant to the customers we serve. There is no more powerful testimony than when the University of Central Florida Police Chief and current President of the International Association of Chiefs of Police Richard Beary, who states, “I get asked all the time, ‘Why do we train so hard and why do we train so much?’ Well, the answer is simple. Unfortunately, across the United States of America what we see is way too much gun violence, and as a 37 year law enforcement person I’m confident in saying this: There’s an armed confrontation coming to a location near you soon. You better prepare now.”

* This is a fictitious school and scenario. Similarities to any actual schools or events are purely coincidental.

BRUCE MILLER is currently the chief of the Active Response Branch in the Enforcement Operations Division. Bruce is a retired special agent with the Air Force Office of Special Investigations, where he served in many capacities across the full spectrum of law enforcement. Before becoming a branch chief, he worked as a program specialist in the Office of State and Local and the Rural Policing Institute, developing training programs for state and local officers nationwide. He holds a bachelor’s degree in criminal justice from Regents University and a master’s in adult education from Troy University. Bruce is also a FLETC certified driving, firearms, and tactics instructor.
By Mike Robbs

On a daily basis across our Nation, law enforcement supervisors and senior agents are conducting roll-call briefs prior to beginning their shifts. During this time, they share sensitive information about recent crimes, trends, and dangerous or significant criminals who need to be located and apprehended. Also during this time, they share or reinforce training-related issues. On a sadder note, they communicate information concerning law enforcement officers and agents who have recently died in the line of duty. When such information is shared the room becomes respectfully quiet.

Emotions and thoughts are stirred, the silence only to be broken with a question, “What do we know about the circumstances of the death?” Or, “What can we learn from this tragedy?” Chris Cosgriff, Founder and Director of the Officer Down Memorial Page once said, “When a police officer is killed, it’s not an agency that loses an officer, it’s an entire nation.” This statement embodies the emotions officers feel when hearing such news, and conveys the strands that bind each federal, state, local, and tribal law enforcement officer and agent in our country. The agency mourns along with all in our profession, for we are connected by a spirit of comradeship, pride, enthusiasm, and devotion to a cause bigger than ourselves.

For years, the Officer Down Memorial Page, the National Law Enforcement Officers Memorial Fund (NLEOMF), and the Federal Bureau of Investigation, through its Uniform Crime Reporting Program’s Law Enforcement Officers Killed and Assaulted publication, have collected, analyzed, and reported on law enforcement officers and agents who were assaulted, killed, or died in the United States. These reports memorialize the officers and agents and help identify trends and lessons learned from such tragedies in hopes that our profession can better prepare officers and agents to be both safe and effective.

Background

Historically, law enforcement organizations have looked for trends related to criminal activity and vehicle crashes in order to identify effective measures to help reduce such occurrences. Similarly, researchers look for trends relating to causes of officer injuries and deaths while on duty. Such data analysis often results in the creation or adjustment of agency policies, standard operating procedures, and/or training objectives.

Recognizing the great lessons to be learned from research, FLETC sought to examine line of duty deaths of FLETC graduates to help identify areas in which training could help mitigate tragedies. In June of 2014, staff from the FLETC Driver and Marine Division and the Training Research Office embarked on an effort to identify, analyze, and report on line of duty deaths of FLETC graduates of the Criminal Investigator Training Program, Uniformed Police Training Program, and Land Management Police Training. Through this work, FLETC has been able to identify lessons learned in order to modify and/or supplement training activities and methodologies at FLETC.

The team began by collecting FLETC graduate line of duty death data on officers and agents who were killed in the line of duty from FLETC’s inception in 1970 until the completion of calendar year 2013. During this period of time, there were a total of 199 FLETC graduates killed in the line of duty from 28 of FLETC’s more than 95 federal partner agencies.

First, the team organized the data on line of duty deaths into the three categories the Office Down Memorial Page and NLEOMF use as primary causes of death. These categories are:

Gunfire related—Officer killed by gunshot regardless of circumstances

Automobile related—Officer died in vehicle crash or was struck by another vehicle

Other cause—i.e. heart attack, terrorist attack, electrocution, drowning, fall, training incident, etc.
As a comparison, the team reviewed FLETC graduates’ line of duty deaths alongside a recent report from the NLEOMF for the years 2004-2014. Because FLETC’s data on its graduates only went up to 2013, the research team only used the NLEOMF’s data through 2013. The chart to the right depicts this comparison and assists in determining if there are any significant differences between the FLETC graduates and those of all United States law enforcement line of duty deaths in terms of primary cause of death.

Lessons Learned from the “Gunfire” Category
Unlike the “Other” and “Automobile” categories, which each clearly fit into a single subcategory, the deaths by gunfire often fit into multiple subcategories (i.e., undercover work while also doing drug/gun interdiction). To analyze this data, the FLETC team coded these cases with primary and secondary subcategories. Therefore, the numbers reported below include both the primary and secondary causes. Thus, the total number of incidents depicted in the chart (73) is higher than the number of gunfire-related fatalities (53).

The subcategories with the most cases were drug/gun interdiction (12), traffic stops (10), and other calls for service/incidents (10). Another trend to note is that for this category, there is a more even distribution among a variety of law enforcement roles. Additionally, most of these roles are areas in which related skills are covered in law enforcement training.

Lessons Learned from the “Auto” Category
While many would guess that most law enforcement line of duty deaths are the result of officers being shot, this has not been the case in the United States. For 16 of the last 17 years, there have been more officers and agents who have died from vehicle-related causes than by any other means.

For a more in-depth analysis, the FLETC research team placed FLETC graduates’ auto related-death data into a variety of subcategories. The most significant finding was that most deaths happened during regular, non-emergency driving. Again, most would guess that there would be more crash deaths during emergency response or pursuit driving. Interestingly, a 28-year study conducted by the National Highway Traffic Safety Administration, which analyzed the deaths of officers who died in vehicle crashes from 1980-2008, found that 58% of these deaths happened during non-emergency driving. The lesson is that improving performance during non-emergency or regular driving appears to be just as critical or important as preparing our students for emergency vehicle operations.

Lessons Learned from the “Other” Category
There was a significant difference between the data for FLETC graduates and the total law enforcement population in the “Other” category. Forty six percent of FLETC graduate line of duty deaths fell into this category, compared to 21% for all law enforcement. Such a difference warranted further investigation.

FLETC analyzed this data, coding it into sub-categories comparable to those NLEOMF uses. Due to the much smaller number of FLETC graduate line of duty deaths compared to those of all law enforcement, the team plotted all FLETC cases (1970-2013) against only the most recent NLEOMF data (2004-2013). The largest difference in this data revealed that more FLETC officers and agents were killed in aircraft crashes (23% versus 8%) and terrorist/bomb related incidents (21% versus 5%).
After closer examination, the team determined that factors leading to deaths caused by airplane crashes and bombings are not generally within the scope of the training officers and agents attending basic training at FLETC receive. When adjusting the numbers by removing aircraft and terrorist/bombing deaths from the overall statistics, the numbers become very similar.

A closer analysis of the adjusted statistics in the ‘Other’ category reveals that the largest risk for FLETC’s graduates comes from health-related issues. There were 24 FLETC graduates in this category. Of the 24 deaths, 18 were from heart attacks.

Conclusions
The goal of the FLETC line of duty death research effort is to learn more about the risks to FLETC graduates and to help identify those risks that may be reduced through training. To date, there have been several key findings from this review:

• There were more FLETC graduate fatalities from “Other” causes than for the larger law enforcement community. However, these differences were areas that fell outside the scope of factors that are addressed in basic law enforcement training (airplane crashes and bombings). When those two subcategories are removed from the analysis, the statistics for FLETC graduates match up very closely to those of all line of duty deaths in the United States.

• Considering all death categories, the three highest risks that could potentially be addressed in training are: (1) automotive crashes (during non-emergency response driving), (2) training related to drug/gun interdiction and (3) health issues (primarily heart attacks).

The Way Forward
The FLETC Driver and Marine Division conducted an analysis of all the graduate deaths in which its specific curriculum covers areas related to the causes of death. The analysis revealed that:

• 39 of the 199 total deaths happened during non-emergency driving. The Driver and Marine Division teaches a course on non-emergency vehicle operations.

• Seven deaths occurred when the officer or agent was responding to a call, i.e., running code or during a pursuit.

• Of the deaths by gunfire, 10 occurred during the execution of traffic stops. The Driver and Marine Division teaches the Risk and High Risk Vehicle Stops course.

• Nine deaths were the result of the officer or agent being struck by a vehicle while on foot, either working a traffic stop and/or at a vehicle crash scene.

• Of the officers or agents listed in the “Other” category, three drowned after their boats capsized. The Driver and Marine Division teaches the Marine Law Enforcement Training Program which includes the Man Overboard and Survival Swimming courses.

As a response to these research findings, the Driver and Marine Division staff is taking measures to mitigate future deaths in these areas through training. Of note is the recent use of driver simulators in which most of the scenarios involve non-emergency driving. During these exercises, the student must apply safe driving practices while utilizing in-car technologies when safe to do so, as well as apply appropriate judgment and decisions regarding other vehicles, pedestrians, and hazards on the roadway during various environmental and weather conditions.

The Driver and Marine Division plans to evaluate a new modified Non-Emergency Vehicle Operations course laboratory and practical exercise in which there is more emphasis on all the requirements of an officer or agent operating a motor vehicle during non-emergency operations.

Other FLETC training divisions will analyze the FLETC graduate line of duty death data related to their curriculums. Such evaluation will help identify training-related changes that FLETC might make to help reduce graduate line of duty deaths.
The conclusions FLETC can draw from its current graduate line of duty death data are limited somewhat by the details available on each death. Additional information on these cases would be valuable to the federal training community.

To that end, the FLETC Training Research Office is reaching out to FLETC partner organizations to supplement available data, and is exploring obtaining additional data regarding FLETC graduates’ line of duty deaths from the Federal Bureau of Investigation’s Law Enforcement Officers Killed and Assaulted annual reports.

FLETC is committed to recognizing its partners’ fallen officers and agents and memorializing their sacrifices in protecting and serving our county. At the same time, FLETC is dedicated to learning from these deaths in order to help mitigate tragedies through training.

“...If we do not determine lessons learned from our Line of Duty Deaths, then in a law enforcement sense, these officers and agents have died in vain.” —Mike Robbs

MIKE ROBBS began his law enforcement career in 1980, serving with the Chattanooga Police Department for 11 ½ years. During this time he worked as a patrol officer, special weapons and tactics officer, special police operations team member, communications division supervisor, and instructor at the Chattanooga Police Academy. Employed at the FLETC since July 1991, Mike has instructed and/or managed in the Physical Techniques Division, Counterterrorism Division, Training Innovation Division, and the Driver and Marine Division. In May of 2015, he was assigned and is currently the law enforcement technology liaison for the Training Innovation Division’s Outreach and Exploration Branch, located in the FLETC Orlando, Florida, office.
Words of knowledge from Three “Wise” Research Professionals

In recent years scientific studies have been conducted which document the negative effects of stress and sleep deprivation as it relates to officer judgement, decision making and performance when faced with use-of-force options and other law enforcement situations. Current research reveals that for 17 out of the past 19 years more officers have died in vehicle related line of duty deaths than by any other cause. Additionally, cardio-vascular disease related deaths such as heart attack and stoke are the third leading reason attributed to on-duty deaths each year.

For those in the law enforcement profession burdened over the effect our jobs have on the health, well-being and performance of our officers and agents, it is a welcome relief when professionals from outside our family come to our aide with their research and knowledge sharing.

Such is the case with the following contributors: Brian Vila, Ph.D., Jonathan Sheinberg, MD., and Jonathan Page, Ph.D., all doctors in their trades with a common goal: To improve the health, and performance of those in the law enforcement profession and to help reduce their job related injuries and deaths.

The scientific findings presented in the following research articles from these “Three Wise Men” provides critical information for the FLETC as well as for all federal, state and local law enforcement departments and training academies. Such information provides leaders and instructors with research based evidence and tools needed to ensure we are providing our officers and agents with the knowledge, skills and abilities to help them to be healthy, safe and effective while performing their jobs.
By Bryan Vila, Ph.D., Stephen M. James, ABD, Lois James, Ph.D. Sleep and Performance Research Center, Washington State University, Spokane, Wash.

Tired Cops

Law enforcement officers need protection against the risks of potentially incapacitating workplace hazards ranging from the physical trauma of assaults, accidents, and errors, to the psychological effects of dealing with tragedy, horror, and rage. The responsibility for officer wellness and safety is shared by officers, their peers and supervisors, organizational leaders, and the communities they serve. These risks can be dramatically reduced if all officers would conscientiously follow the five tenets of the “Below 100” initiative:

- Wear your seat belt.
- Wear your body armor.
- Watch your speed.
- Focus on “What’s important now?”
- Remember, complacency kills!

When these tenets are followed, the risk for officers to be injured or killed is reduced. (See Dale Stockton, http://calibrepress.com/2015/05/the-preliminary-fbi-leoka-report/). However, the direct causes of death and injury, such as failure to follow safety guidelines or to make tactically sound decisions, may be linked to another factor, failure to think clearly. Unfortunately, this critical skill is frequently impaired by the fog of long shifts and sleep deprivation.

Sleep is as critical for life as air, water, and food, and the need for sleep is deeply ingrained in our biology. If you go too long without sleep, your body will put you into a sleep state involuntarily, much as it will eventually make you gasp for air no matter how hard you try to hold your breath. Unfortunately, the demands of police work make it difficult for a majority of officers to get the roughly 7.5 hours per day needed to stay healthy and think clearly. Extended operations, extra work shifts, and personal obligations or preferences also often keep officers awake for more than 17 hours a day. That is the point where many key aspects...
of performance are as impaired as if an officer has a 0.05 percent blood alcohol level. This impairment accelerates with each additional hour awake, reaching a 0.10 percent blood-alcohol equivalent after 24 hours awake. Worse still, working nightshifts reduces the amount of quality sleep. As night-sleepers, humans are built to be awake during the day and sleep at night. This makes shiftwork unnatural and especially fatiguing for officers working nightshifts because it is harder for them to fall asleep—and stay asleep—during the daytime.

Extensive research evaluating human sleep makes it clear that sleep-related fatigue interferes with the ability to drive safely, observe and recount incidents accurately, make decisions that require insight, assess risks, think “outside the box,” and control emotional responses. Sleep loss has a negative effect on the “executive” region of the brain (the prefrontal cortex) where problems are solved, factors prioritized, and consequences considered. Sleep loss also reduces vigilance and the ability to employ expertise and finesse. Unfortunately, previous research used performance challenges that bore little resemblance to critical police tasks such as driving an emergency vehicle loaded with technology or dealing with high threat encounters or people in crisis. Furthermore, police officers, who commonly face long shifts and/or limited amounts of sleep, were not used as subjects.

Fatigue and Critical Police Operational Task Performance
In order to measure the impact of shift work and long work hours on police officers, 80 experienced patrol officers from the city of Spokane, Washington, were tested over a two year period. The study focused on comparing two conditions, “Fatigued” and “Rested.” The Fatigued measurements were taken after the last shift in a five-day workweek. The Rested measurements were taken at the same time of day as the Fatigued values—only for this condition testing came after the third consecutive day off. All officers worked five 10 hour and 40 minute shifts each work week, followed by four days off. In order to control for testing sequence,
initial test for half the officers was during the Fatigued condition and the other half was Rested with a minimum of three weeks in between. The overall design also allowed researchers to compare the four work shifts and examine performance levels for each shift.

Sleep was monitored using wrist actigraphs, which provide a reliable and objective 24/7 measure of sleep; the Epworth and Karolinska sleepiness scales (KSS) and the Pittsburgh Sleep Quality Index (PSQI), which are self-report instruments; and daily self-reports collected in a sleep diary. All data collection was conducted at Washington State University’s Sleep and Performance Research Center to control for consistent light, sound, and temperature where participants reported to the laboratory immediately after their work-shifts (fatigued) or at the same time of day after three days off (Rested). Participants completed a series of simulated critical operational tasks: deadly force judgment and decision making, operational driving, cognition, tactical social interaction, and “non-operational” driving. Each of these measures of operational performance was bracketed with a psychomotor vigilance test (PVT) that assessed sleep-related changes in alertness and reaction times.

Driving tests were conducted using L3 PatrolSim IV high-fidelity driver training simulators using custom scenarios designed for this research. Deadly force judgment and decision making and tactical social interaction tests were conducted in our laboratory’s use-of-force ranges, which use AIS PRISim L1000 systems as a core. Cognitive tasks were conducted in cubicles on dedicated workstations.

After the experimental protocol, fatigued-condition officers slept in dark, sound-proof, comfortable, and private rooms to assure that they were sufficiently rested to drive home safely. In the Rested condition, officers completed the same tasks in the same order, but were allowed to go home immediately after the study.
The results and implications are still emerging; however, we found that there is a significant difference between individual officers’ performance in the Fatigued vs. Rested conditions. Fatigue significantly impairs driving performance with and without distraction challenges—which we will discuss further below. It also appears to have significant effects on some aspects of tactical social interaction and shooting reaction times, but further analyses are still underway to determine why.

At the shift level, we also found that officers whose shift assignments required them to sleep during the daytime were significantly more likely to perform more poorly in the simulations than those who were able to sleep at night. Day-sleepers had more collisions in the driving simulations, did less well in tactical social interaction scenarios, and tended to be quicker to shoot during deadly encounters.

Driving and Fatigue: Officers’ performance in the high-fidelity driving training simulators was significantly degraded when they had less sleep and had been awake longer. Officers were assigned a simple task where they drove on a rural highway at 55 mph with no other vehicles on the road. During the drive, from five to seven incidents would occur in which a person or animal walked into the road at random locations. Using a statistical model that accounted for how much sleep officers obtained during the previous 72 hours and how long they had been awake when they were tested, we found a highly significant connection between less sleep, being awake longer, and the probability that an officer would have a collision. The performance of officers from all but one of the four shifts also was significantly worse during the fatigued condition. The only exception was the second shift of the day, which began at 10:00 a.m. and ended at 8:40 p.m.—likely because this shift allows officers to sleep in later in the morning and get off in time to get a full night’s sleep.

Vigilance: The psychomotor vigilance test showed that day-sleepers had significantly slower reaction times than night-sleepers. They also were as much as twice as likely to have lapses in attention longer than half a second. This degraded performance also was persistent; rested day-sleepers performed at similar levels than fatigued night-sleepers.

Tired and Distracted Driving

Being sleep deprived can certainly impair decision making, but another occupational challenge also competes for an officer’s attention—the smorgasbord of communication devices found next to the driver. To what extent do communication devices impact driving and decision making ability—especially when the officer is tired? Here’s what our research revealed:

Distracted Driving, Fatigue, and Shift Assignment: Officers’ performance in the high-fidelity driving training simulators was dramatically worse when they were presented with a simple in-car distraction task. During two 30-minute simulated drives on an otherwise empty rural highway, officers were told to follow a lead vehicle at 55 mph, stay within 100 feet of it, and brake when it did—without changing lanes, swerving, or running into the lead vehicle. During one of the drives, officers were asked to do as many word-search distraction tasks as they could without colliding with the lead vehicle. For the distraction task, they scrolled through a list containing sets of three words in large print on the mobile data terminal just to the right of the steering wheel and selected the one with a target word in it.

Officers’ driving performance was significantly worse while they tried to do the distraction task even though it was substantially less challenging than looking up an address on a cell phone. Officers took significantly longer to brake when the lead vehicle braked. They also were significantly more likely to collide with the lead vehicle even though they appeared to try to compensate for the distraction task by staying farther back from it. Of the 23 collisions we observed during 1,308 distracted driving sessions, all but one occurred when officers were performing the distraction task.

During the non-operational or “drive home” simulation, more collisions occurred in the Fatigued condition than the rested condition. This effect was much stronger for day-sleeping officers (those working the 4:00 p.m. to 2:40 a.m. and 8:00 p.m. to 6:40 a.m. shifts. Among officers on the 4:00 p.m. to 2:40 a.m. shift, only 6% of rested-condition drives ended in a collision, compared with 41% of fatigued-condition drives. Among officers on the 8:00 p.m. to 6:40 a.m. shift, 14% of rested-condition drives ended in a collision compared to 22% of fatigued-condition drives.
Managing Fatigue-Related Risks

Much remains that we do not yet know about the impact of shift work, long work hours, and fatigue on police officers, but the results of our research have led to several basic rules of thumb for managing fatigue-related risks:

• Get screened for sleep disorders. Officers who cannot get enough sleep, or feel tired even after sleeping long enough to be rested, should get screened by a sleep physician. Remember, 40% of all police officers screen positive for (mostly undiagnosed) sleep disorders.

• Manage caffeine. Caffeine can be an effective short-term stimulant—but only if officers haven’t become desensitized by frequent, large doses. It’s best to stop consuming caffeine three to six hours before officers plan to sleep.

• Deal with shift work basics. Officers require at least 11 hours off between shifts, so that they can feasibly get eight full hours of sleep between shifts. In addition, officers working nights should have at least two days off after a series of night shifts and stay on duty no longer than 12 hours (except in emergencies)—nine hours is a better maximum, especially for day sleepers. Officers working at night should try to reduce monotony and increase light exposure. They also should monitor their own fatigue and that of their fellow officers and subordinates.

• Take safe opportunities to nap. When they haven’t gotten enough sleep, officers should nap in a quiet, dark, cool environment. It’s easiest to nap between 1:00 a.m. and 6:00 a.m. in the morning, and between noon and 2:00 p.m. is a good alternative. If officers must be awake for a long time, they should nap ahead of time to build their sleep reserves.

• Beware the drive home. The more consecutive shifts that officers work, the greater the risk of collision during the drive home. This is especially true for night-shift workers. Officers need to be mindful of this, and take action to counter extreme fatigue should it occur. At the end of a long night shift, it’s better to take a long nap before driving home or to have someone who is rested do the driving. Law enforcement agencies should consider setting up napping rooms and providing safe transport home for officers who’ve worked extended night shifts.

Endnotes

As a fellow law enforcement officer and a physician, I am trying to spread the word. We are missing the boat, and because of this, we are dying.

There is a simple reason that law enforcement officers have some of the best pensions in the country—we do not live long enough after retirement to fully collect them. Several programs have been created to address premature officer death, and officer safety is a primary concern for every agency whether on the local, state, or federal level. Police officers and special agents are intimately aware of safety policy and procedure requirements: wear reflective vests, always use body armor, do not engage in high-speed pursuits for low-level crimes, etc. Despite these efforts, however, there is another cause of officer death and disability that is usually overlooked—cardiovascular disease.

Heart attacks are always in the top two or three categories of police line of duty deaths. However, if extrapolated to a full 24-hour day, heart attack likely becomes the number one killer of men and women in uniform. This is not new information. More than 20 years ago, the International Association of Chiefs of Police (IACP) published some of its initial data (Violanti, 2013).
The data are shocking.

The life expectancy of a police officer is 20 years less than his or her civilian counterpart. The average age of a law enforcement officer (LEO) who has suffered a heart attack is 45 years, compared to 67 years of age for the general population (Figure 1). Finally, it is known that a LEO is 25 times more likely to suffer death and disability from heart disease than from a violent action of a suspect. Despite this information, many agencies have been slow to develop wellness programs and cardiac screening assessments.

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<td>Average age of patient</td>
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Figure 1: The comparison between police officer and civilian age for heart attack and life expectancy.
It is now very clearly understood that the most effective treatment of coronary artery disease is prevention. With today’s technology, the understanding of nutrition and the development of certain medications, heart disease is completely detectable, preventable, and even reversible. The key to this prevention, detection, and treatment of cardiovascular disease is the development of a cardiovascular screening program and an overall wellness program.

Wellness is defined as the condition of good physical, mental, and emotional health, especially when maintained by an appropriate diet, exercise, and other lifestyle modifications. Any program that supports wellness is absolutely vital in a profession in which 80% of officers are obese (Shell et al, 2003). Obese police officers may at times be ineffective in their jobs and may place their agencies in a position of increased liability. It has been seen time and time again. An “out of shape” officer may resort to deadly force more quickly than his or her physically fit counterpart, as the ability to go “hands on” becomes less effective. Obesity is not a problem specific to law enforcement; it is a global pandemic, and recently for the first time in recorded history, 30% more deaths will occur from complications of obesity than from starvation.

The concept of wellness centers around nutrition. To better understand nutrition, several myths need to be dispelled. First and foremost, the biggest public health nightmare in the last 50 years arose from the 1983 United States guidelines recommending a reduction of fat in the American diet from 40% to 30% of calories consumed. The results have been catastrophic and have resulted in the obesity pandemic and the associated complications of obesity such as the increase in type II diabetes and the increase in cardiovascular disease. In 1983, an inaccurate concept was presented: dietary fat consumption results in heart disease. It was thought that dietary consumption of fat raised Low Density Lipoproteins (LDL—or bad cholesterol). LDL causes heart disease; therefore, dietary fat causes heart disease. This is simply not true. Although dietary fat does raise the bad cholesterol, it raises a type of bad cholesterol which is actually not that bad after all. Fat consumption results in an LDL particle that is buoyant or “fluffy.” These large, fluffy particles pass directly through the blood stream and are cleared by the liver. They are not absorbed into the blood vessel walls, and therefore, do not contribute to arterial blockage formation.

In contradistinction to this, when carbohydrates or sugar are eaten, the body produces a type of bad cholesterol that is truly bad. These cholesterol particles are small and dense (think golf balls vs. beach balls), and therefore have the ability to cross the cell lining of the blood vessels and collect in the coronary artery wall. This is how plaque (and eventually coronary disease) develops. It is therefore essential to understand that it is in fact carbohydrates and sugar that result in heart disease, not fat. It is now understood as fact that bread, rice, pasta, juice, soda, tortillas, and such cause the development of bad dense LDL particles and therefore the development of heart disease (Figure 2). The concept of a diet rich in fruits, vegetables, and meat is the basis of the “Paleo” or caveman diet. This diet of low carbohydrate consumption is not only vital to cardiac health but to overall general wellness.

Figure 2: Dietary fat results in large “fluffy” LDL particles, while the consumption of carbohydrates results in the development of small dense LDL particles. In the example above, both individuals have an LDL of 100mg/dl but it is the person with the more small dense cholesterol particles who is at risk for heart disease.

It’s a perfect storm and it’s not your fault… Our bodies are not designed to eat carbohydrate-laden processed food. However, the deck is stacked against us. Sugar, wheat, and corn are subsidized by the federal government and are therefore inexpensive. Processed food is readily available and packaged for ease of consumption.
Finally, this type of food tastes good and it is addictive. It is a well-understood marketing tool that the more sugar a manufacturer places in the food, the more it is consumed. The combination of inaccurate guidelines, subsidization, processing, and the adding of sugar to improve taste has resulted in the biggest public health crisis in the last 50 years, that is, obesity, diabetes, and progressive heart disease.

We are not powerless…
In order to turn back the tide of obesity, diabetes, and heart disease the physiology of obesity needs to be examined and understood. Obesity is not simply a bad behavior; it is problem of biochemistry.

When hungry, the stomach secretes a hormone called ghrelin. This peptide reaches the brain and tells the brain it is time to eat. After eating has begun, the fat tissue receives nutrients and a hormone called leptin is released. This leptin travels to the brain and activates the nervous system resulting in the “sugar high.” The brain knows it has food available and therefore it is okay to expend energy. However, when an individual is overweight, his or her body’s insulin levels are elevated. The elevated insulin present in the body blocks the leptin and the brain does not know it has been fed. In essence, those with elevated insulin levels have brains that think they are “starving.” In this situation, the brain attempts to decrease the body’s metabolism, hold onto every calorie, and does not “encourage” exercise. This works great if one is starving. But for the majority it backfires; it creates obesity.

This cycle CAN be broken! By simply removing the sugar from the diet, the body’s insulin level will decrease and the brain will once again recognize leptin. Weight loss occurs rather quickly. Therefore, the rates of obesity, diabetes, and heart disease can be radically reduced by simply eliminating sugar and reducing carbohydrates from the diet.

Early detection is key…
Screening is defined as the “examination of a group to separate well persons from those who have an undiagnosed pathologic condition or who are at high risk.” In other words, how can a population of police officers, who have been historically at high risk for premature heart disease, be evaluated to identify those individuals who are likely to develop heart attacks before they have their first problem?

In order to help answer this question, the Public Safety Cardiac Foundation was created. This foundation is a 501(c)3 (not-for-profit) entity, developed to obtain grant funding to sponsor cardiovascular research and promote cardiovascular screening within law enforcement agencies. The Public Safety Cardiac Foundation has already created the Cardiac Screening Initiative, a pilot study that has made some significant headway in developing strategies to help in the early detection of heart disease in police officers. The Cardiac Screening Initiative evaluated police officer volunteers who were not having any symptoms. These officers were asked to perform three very simple screening tests: an exercise treadmill test, a coronary calcium score CT scan (a low dose radiation CAT scan...
designed to detect the small flecks of calcium present in blockages), and an advanced blood test. The advanced blood test (Boston Heart Diagnostic Lab) was performed to look at the presence of different types of cholesterol particles and the presence of a maker of coronary inflammation, which would suggest the early development of blockage. This inflammatory biomarker, phospholipase associated appoprotein 2, (PLA-2), is an enzyme that is released by the heart’s blood vessels in response to blockage formation. This process is similar to the inflammation that occurs after getting a splinter. The results of the study so far have been absolutely staggering. Of the officers screened to date, 54% have detectable coronary disease.

Save lives, save money…

By detecting coronary disease in its earliest stages and before it causes symptoms, it is possible not only to save officers’ lives, but also to keep officers on the street and reduce their agencies’ expenses. Due to the high costs of health care, it is estimated that aggressive screening for heart disease can save approximately $5,000 per officer per year when extrapolated across a large department. Also, after coronary artery bypass surgery, a heart attack, or a stent placement/angioplasty there are significant amounts of time that the officer will be off the job, requiring increased overtime for the remainder of the officers. This cost is ultimately passed along to the taxpayers.

The responsibility for officer wellness and screening lies within the training academy, the agency, and the individual officer or agent. Initially, the training academy must set the tone and establish the concept that wellness is an important component of law enforcement. Just as graduates currently understand that they will be required to maintain proficiency with their weapons, they should also have the expectations that they will be required to maintain physical fitness and weight standards. Individual agencies must also develop a degree of accountability within their ranks, using either the “stick or carrot” approach or any combination of thereof. Agency fitness standards cannot be created in a vacuum, but instead, need to be developed with collaboration among command staff, departmental physicians, union representatives, fitness professionals, and training directors. Finally, it is ultimately the responsibility of individual officers or agents to understand their increased risk for coronary disease and to seek out possible screening and wellness programs, even if their specific agency does not offer them.

It is quite clear that obesity, diabetes and coronary disease are major factors that contribute to premature police officer death and disability. It is absolutely vital that law enforcement agencies recognize this risk and develop wellness and screening programs to keep their officers healthy, effective, and safe.

Citations

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Editor’s Note: For many years there have been numerous research studies documenting the negative effects of stress as they relate to officer judgment, decision making, and performance when faced with deadly force and self-defense situations. At the same time, for approximately 16 of the past 18 years there have been more law enforcement officers and agents killed in the line of duty by vehicle related incidents than by any other cause. Thus, there is a great need to investigate the effects of stress as they relate to law enforcement driving.

In coordination with the Metropolitan Police Department in England, Dr. Page used law enforcement driving as the foundation for his research study, which attempts to link specific brain functioning to higher order cognitive tasks such as visual discrimination, multitasking, and imagination while driving emergency response. Of particular interest to his team and him is finding out how these processes may change under stressful situations. Much of Dr. Page’s research endeavors have been laboratory and field experiments that help to better understand how maintaining cognitive control influences driving and tactical decisions in law enforcement.

The scientific findings of Dr. Page’s study regarding the effects of stress and performance during learning and in law enforcement operations are critical information for FLETC as well as for all federal, state, and local law enforcement departments and training academies. Such information provides leaders and instructors with knowledge and tools needed to ensure they are teaching specific skills in a way that works with the brain—not against it in order to help ensure those they are preparing to serve and protect are learning the critical skills needed to safely and effectively perform their jobs.
The dispatcher’s call crackles over the radio in the squad car, “terminate the pursuit, terminate the pursuit.” The officer ignores the directive and continues to pursue the fleeing vehicle. In a short time, the pursuit indeed ends; but it ends in a non-fatal crash that tarnishes the officer’s reputation and leaves the police agency exposed to liability issues.

A few years ago, a deputy commissioner of a large police organization asked us why the officer in the above example did not disengage the pursuit as instructed by the dispatcher. There had been three similar cases in his organization in the year and a half leading up to our discussion, so he was interested in finding the answer. In his words, “I spoke to all three officers and they all claimed not to have heard the termination order. But is that possible? From a scientific standpoint, is it possible to be engaged in a radio conversation with dispatch, but somehow miss this vital information?”

To answer the deputy commissioner’s question, we conducted a series of experiments designed to explore multitasking under stress and to find training techniques to improve cognitive functioning and control during such instances. We believe sharing our findings here will be beneficial to the field of law enforcement, but our research should also be taken as a demonstration of how law enforcement can use science to find such answers.

Multitasking on the Skid Pan
We spent two summers in London researching at the London Metropolitan Police’s driver training school in Hendon. At the training facility is a skid pan: a large, circular asphalt area that slopes gently to a drain in the center. Cones and tires are placed at key locations to create “courses” the instructors can use during training. Each morning an instructor covers the skid pan with a fresh coat of oil and then turns on water that trickles out of spigots embedded in the curbing. The water trickles over the surface throughout the day, mixing with the oil, to create a slick surface that allows the instructors to teach traction control.

We recruited a few officers attending a driving course, along with a handful of instructors, and connected a portable electroencephalograph (EEG) to their heads to measure brain activity while driving. Additionally, we asked them to discriminate between two tones (low- and high-pitched beeps) while navigating a course of half circles on the pan. Our original plan was to see if
one of the two groups was better at multitasking than the other. We hypothesized that the instructors would be better, and that the difference could be attributed to expertise (i.e., amount of training).

Our findings may not surprise you, but they surprised us at the time: the trainees were under a great deal of stress during the driving test. We had not considered that stress may play a role; why should we? The task was simple: drive in slow circles while counting beeps. It became clear, however, that most of the trainees were experiencing a tremendous amount of stress. When we asked why, one trainee said, “Because the instructor is in the car.” Our response was, “The instructor told you that he was not evaluating you today, he was simply riding along to follow protocol.” The trainee responded, “Maybe he didn’t evaluate me today, but had I screwed up on the course, he would have remembered my bad performance the next time I am on the skid pan for training.”

Looking at our brain data, a bump (known as the P300) at a specific point in the brainwaves indicates participants were paying attention and discriminating the beeps. They were multitasking. No bump means that they were not multitasking. A bump is obvious in the instructors’ EEG, which matches their nearly perfect performances of counting the high-tones; but we didn’t see much of a bump in the trainees’ brainwaves. The difference is more obvious when comparing performances at the extremes: We saw textbook-perfect multitasking by an instructor, and absolute tunnel vision by a trainee. The colors in the brain model of our graph represent neural activity attributed to the task. Again, the instructor was multitasking (bright colors); the trainee was not (dull colors).

The following summer, we directly measured stress as it relates to multitasking. Again, we found that those trainees with the highest levels of stress (determined by self-reports and measures of the stress hormone cortisol) performed the poorest, and those with the least amount of stress performed the best. We included three skid pan instructors in the study and found their performances to be perfect.

Left: University students volunteer to be hooked up to sensors as part of a study on attention responses.
In discussions with the few trainees that performed fairly well, we asked why they were so close to accurately counting the tones, but were still slightly off (usually by only a few counts). Their responses were all similar and went something like this...“I was driving along counting the beeps when all of a sudden I sensed that I was losing control of the vehicle. All of my attention went towards getting the vehicle back under control. Once I felt that I was back in control, I heard another beep. That reminded me to start counting again. I didn’t hear the beeps while I was trying to gain control of the vehicle, so I had to guess how many beeps sounded during the time that I wasn’t paying attention.”

Our research showed that an officer could be in control and multitasking until something threatens her/his control of the vehicle. At that point, multitasking was compromised. It would be like pursuing another vehicle and talking on the police radio. An officer may be doing both, but if a threat suddenly appears—like another vehicle approaching from a side street or a child running through a yard along the pursuit path—the officer turns all of his or her focus towards controlling the threat and maintaining safety. During this time, the officer may miss auditory information from the police radio. Once the threat is no longer present, multitasking resumes.

**Laboratory Study of Multitasking and Memory**

In a laboratory study in London, we had officers with different amounts of training watch one-minute videos of pursuits while counting beeps (multitasking). After each video, we recorded officers’ detailed memories of the pursuit. We found large memory differences between groups, with the highly trained pursuit drivers scoring the highest on the memory tests, followed by the lesser trained response drivers, followed by officers who had not received police driver training. There were no differences between these groups using standard tests of memory, nor when looking at brain activity related to multitasking. The differences were for police-related information only, and were due to training.

What about their training led to these differences? Our research showed that the pursuit drivers had a much more detailed pattern-recognition system, probably due to training using verbal commentary—a technique used by the driving school to train with correction. Using this method, trainees are required to talk about what they are doing as they do it so that the instructor can assess intent along with behavior. As a side benefit, describing the environment and giving details about the maneuvers they were performing seemed to train up the pattern-recognition system.

**Our Additional Research Findings**

Since our original findings in London, we have conducted several studies aimed at finding ways to enhance training by building strong pattern-recognition systems in the brain. In one study, we partnered with a driver training program called “Slower is Faster” delivered by the Hillsborough, North Carolina, Police Department. They allowed us to conduct research during their driving course. Brain activity was measured using a portable EEG while officers drove a closed course on an abandoned airport runway. We assessed multitasking, using beeps again, and driving, by timing each drive and counting errors based on how many cones were struck.

Initial measures were taken from two groups (baseline), followed by an hour and a half break, and then a second round of measures were taken (test). One group rested during the break; the other group received 75 minutes of training on how to stay in cognitive command, which we refer to as C2. Results showed that the improvement between drives, comparing the test to the baseline, was greatest for the cognitive command group. Its multitasking
improved six fold compared to the control group and its driving improvement was tenfold.

Additional research has shown that these improvements are not specific to driving. We found similar results during a scenario-based test at a deputy sheriffs’ academy. An academy class of deputies were trained in cognitive command and put through a scenario-based test of tactically clearing a building. A variety of responses were evaluated and recorded and compared to another academy class of deputies that had not been trained in cognitive command. The cognitive command deputies showed an increase in perceptual awareness, memory, pattern-recognition, and confidence compared to the control group.

Conclusions
Officers and trainers that we have talked to generally agree that there are two basic reasons why the driver in the above example failed to follow the directive to terminate the pursuit: (1) the officer heard the command but was so jacked up on adrenaline, and had such a bad case of red mist, that he simply didn’t want to stop the pursuit; or (2) stress from the pursuit led to a form of auditory exclusion that prevented him from hearing the directive.

While our research cannot determine why an officer behaves in a certain way in a given situation—i.e., there is no machine to date that can literally read minds—our research does show how such mental lapses can occur. Stress wreaks havoc on our cognitive and perceptual systems. When under “threat-of-harm” or “threat-of-life” stress, our system behaves much differently from what is typical.

We were also able to show that training can mitigate some of the effects of stress. Cognitive command training has a positive effect on stress-related performance. Having a strong pattern-recognition system allows an officer to automatically understand a situation and take quick and decisive action. It increases awareness and frees up neural resources so that additional information can be attended to and processed. Our current research into this exciting area is providing first-of-its-kind information about how a pattern-recognition system can be trained in law enforcement; and we are expanding our brain research into new areas and testing training concepts that should have a positive impact on academy and in-service based training in the near future. Being able to answer questions about stress and officer behavior from a scientific point of view is essential. Having an understanding of how the brain operates under stress can inform opinions on policing behaviors and improve police training.

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\text{JONATHAN PAGE is a professor, cognitive neuroscientist, and co-founder of the World is Round, LLC, a research, training, and consulting company. He has conducted more than a decade of research studying human perception and action. His extensive research on physiological responses to stress and how stress influences behavior led him to pursue new and more effective ways to deal with stress and stressful situations. Collaborating in field research with law enforcement agencies in the U.S. and U.K. provided Jon with the knowledge he needed to develop cognitive command, a mental mindset training technique for public safety. Along with his wife Kasee, Jon co-authored a training curriculum that is currently being used in law enforcement academies in the US. He also authored the book NeuroCop: The Science of Using Automatic Thinking to Guide Tactical Behaviors (www.see-too.com) and has published his research in several professional journals.}
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\text{KASEE PAGE is an educator. A love for learning and growing knowledge led her professional experiences in the fields of education and research. She has taught in multiple U.S. regions to numerous student populations from public grade schools to institutions of higher education, and participated in field research in the U.S. and abroad. Kasee received a Master’s in Educational Leadership from the University of Nevada. She has trained district administrators and teachers in professional development to implement new curriculum and instruction methods in public education and worked as a leadership team member for school improvement plans, including an extended administrative internship role. She has worked as a consultant for a large western school district and volunteered for the May Foundation to provide enriched learning events for Northern Nevada’s children. Kasee is co-founder of The World is Round and is currently conducting research with her husband Jonathan to develop curriculum and instruction training methods for law enforcement. Kasee’s most important teamwork assignment with her husband Jonathan is being mom to their three young adult kids.}
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IACP PRESENTATIONS

October 24–27, 2015, at the 122nd International Association of Chiefs of Police Conference in Chicago, Illinois, FLETC instructors will deliver the following presentations:

- **Developing an Effective, Practical Use of Force Training Program**  Recent high profile events headlined in the national media have put the spotlight on police use of force. Too often, the media reports information based upon an incorrect/unrealistic perception of the legal environment and the challenges law enforcement officers face. This presentation will highlight the importance of having an effective use of force training program. Presenters will examine methods of designing and implementing a modern program given the recent attention placed on police use of force encounters.

- **Eight Signs of Terrorism**  When determining if a terrorist attack is imminent, law enforcement knowledge of the operating environment is critical to determine what might be out of place. Terrorist attacks do not occur in a vacuum. Whether the terrorists are domestic, international, or lone wolf, persons who intend to commit terrorist acts or to support those acts have been observed conducting surveillance, testing security, gathering information (elicitaiton), and acquiring supplies. These are just some of the indicators reflected in the Eight Signs of Terrorism. Other signs include solicitation of funding, suspicious behavior, rehearsal and dry runs, and getting into position and deploying assets. Law enforcement at all levels of government can observe these indicators. Reporting these indicators became the emphasis of the Department of Homeland Security’s (DHS) “See Something, Say Something” campaign.

- **Tactical Medical Training: Integrating into Basic Law Enforcement Training**  When implementing tactical medical training in a basic training environment, law enforcement agencies must consider time and money. For each hour added to a basic training program, there are additional costs to the agency in either the time added to the training program or time taken away from existing curriculum. An additional consideration is the cost of equipping each officer with the tools required to implement the training in the field upon graduation. This workshop will provide information included in FLETC’s Basic Tactical Medical Training Program and lessons learned while implementing tactical medical training into basic law enforcement curriculum.
By Tim Miller

The Supreme Court’s decision in San Francisco v. Sheehan inched closer to answering the question about whether a police officer has a legal duty to de-escalate force when confronting an armed, violent, and mentally ill suspect. For officers, the news was good. Qualified immunity remains a strong defense against claims about what they should have done. But the news for their employing agency was not as good. Whether the agency can be sued under Title II of the Americans with Disabilities Act still depends on the federal circuit.

Teresa Sheehan had become a threat to herself and others. She lived in a group home for people suffering from mental illness and was not taking her medications. “Get out of here!” she shouted after a social worker entered her room. “You don’t have a warrant! I have a knife and I’ll kill you if I have to!” Two police officers were dispatched to the home. Now… there is a paradox in the motto “To Protect and Serve” emblazoned across the sides of so many police cars. The officers had no duty to act—at least not a legal duty imposed by the Constitution. Had Officer Holder and Sergeant Reynolds ignored the call, they would have avoided nearly seven years of litigation.

The duty was triggered when they entered Ms. Sheehan’s room. Entering her home was a Fourth Amendment search; the force the officers would use to take her into custody, a seizure. The Fourth Amendment requires police officers to perform objectively reasonable searches and seizures. Entering a home without a warrant is presumptively unreasonable; but so far, so good for the officers. This was an emergency, a reasonable exception to the warrant requirement. Ms. Sheehan was a threat to herself and others. She had threatened the social worker and what happened next confirmed
that she posed a threat to anyone in her room. When the officers opened the door, Ms. Sheehan grabbed a knife. She raised it over her head and came forward forcing the officers to retreat and close the door behind them. But still… so far, so good. Ms. Sheehan was alone in her room; and the officers were outside in the relative safety of the hallway.

Most of the litigation would be over what the officers did next. Rather than wait for backup or try to de-escalate the situation, Holder and Reynolds reentered the room. Predictably, Ms. Sheehan charged them with the knife. Predictably (her lawyer would argue) the officers shot her. Officers initially tried pepper spray, but Ms. Sheehan would not drop the knife and the officers shot to save themselves. Ms. Sheehan survived, and she sued the officers for Fourth Amendment violations and their employing agency under Title II of the Americans with Disabilities Act (ADA). The facts supported both claims; specifically, that the officers should have waited and de-escalated the situation instead of charging back into the room.

The Supreme Court dismissed the case against the officers. Holder and Reynolds requested qualified immunity—their defense to standing trial for a constitutional tort. Qualified immunity is like an implied contract between police officers and the federal court system. It goes like this:

We, the officers, promise to follow the U.S. Constitution. And we, the courts, promise to put officers on notice about what is not constitutional. The court will dismiss the case against the officer absent some act or course of conduct that violated a clearly established constitutional right.

The officers’ appeal to the Supreme Court was over the lower court’s decision to deny them qualified immunity and to make them stand trial. The United States Court of Appeals for the Ninth Circuit believed there was enough room for a jury to find that the officers violated Sheehan’s clearly established right not to be provoked into the deadly encounter. Be clear: The question was not whether the officers’ initial entry into Ms. Sheehan’s room was reasonable. The Ninth Circuit conceded that it was. Deadly force to seize Ms. Sheehan—viewed at least from the standpoint of the moment of the shooting—was also reasonable. No need for a trial over that, either. The question was over the Circuit’s “provocation doctrine.” In the Ninth Circuit, officers can be liable for an otherwise reasonable use of deadly force if they intentionally or recklessly provoked the deadly confrontation. A jury would have answered that, had the Supreme Court not granted review of the case.

The Supreme Court reversed the Ninth Circuit. Even assuming the officers provoked the encounter—and even assuming that the provocation was unconstitutional—the law was not clearly established. The Court found wanting any robust consensus of precedent that would have put any reasonable officer on notice about when it was reasonable, or not, to enter the room. Qualified immunity is designed to protect all but the plainly incompetent or those who knowingly violate the law. It is not exactly a noble standard to live up to, but has a purpose in situations where police officers are likely to face public ridicule for not acting and personal liability when they do—particularly with suspects who are predictably unpredictable. That the law be clear is an exacting standard. It keeps the Fourth Amendment’s objective test from fading into a subjective one that would allow juries to second guess police officers when things go wrong.

The ADA claim against the agency will proceed to trial. There is a circuit-split about whether an officer’s employing agency can be sued under the ADA in a case like this. The Supreme Court was going to resolve the split and answer whether Title II of the ADA requires police officers to accommodate an armed, violent, and mentally ill suspect in the course of bringing her into custody. Unfortunately, the parties did not properly brief the question and the Court saved it for another day. That kept the ADA claim how the lower court left it.
The Ninth Circuit sided with the other circuits that held that the ADA applies to anything a public entity does, which would include taking someone like Ms. Sheehan into custody. While the Court agreed that an accommodation may not be reasonable, it held that a jury should make the decision here. Since Sheehan was alone inside her room, and the officers outside, less confrontational tactics may have been available, and therefore, she could have been denied the benefits of the services, programs, or activities of a public entity.

Research on mental health epidemiology shows that mental disorders are common throughout the United States, affecting tens of millions of people each year, and that overall only about half of those affected receive treatment. Cases like Sheehan will happen again. When they do, there will be no winners. There never are in a case where someone calls the police for help and the police are forced to shoot the person needing the help. Winning will be left to training. Columbine, Sandy Hook, and the Washington Navy Yard shootings prompted active shooter training—training that plants the file in the officer’s brain to ask questions like, “Where is the suspect?” and “Who else is inside?” Getting less press, but happening at least as often are people like Sheehan barricading themselves behind closed doors and promising harm to anyone coming in. “Does she pose a danger to anyone else?” would seem just as an important a file to plant. And if she does not, why not wait and see if the passage of time will defuse the situation? The law gives police officers a lot of breathing room to make a plan and not be sued for taking the time to make one. There is no duty to act, and when they do, qualified immunity remains a strong defense against claims from those who want the perfect answer.

Citations


3Private citizens generally do not have a constitutional right of protections from other citizens even if the officers or their agency know about the danger and could provide it. DeShaney v. Winnebago County Dept. of Social Services, 109 S. Ct. 998 (1989).

4Individuals in their personal capacities are not subject to suit under Title II, which provides redress only from public entities. Baribeau v. City of Minneapolis, 596 F.3d 465, 484 (8th Cir. 2010).

5The Ninth, Tenth, and Eleventh Circuit held that the ADA applies to arrests. See Sheehan v. San Francisco, 2014 U.S. App. LEXIS 3321 (2014), reversed in part San Francisco v. Sheehan, U.S. LEXIS 3200 (2015); Bircoll v. Miami-Dade Co., 480 F.3d 1072 (11th Cir. 2007); Gohier v. Enright, 186 F.3d 1216 (10th Cir. 1999). But not every circuit agrees that an arrest is a service, program, or activity of a public entity. The Fifth Circuit held that the ADA does not apply to arrests or other on-the-street responses made by law enforcement until the scene is safe. Hainze v. Richards, 207 F. 3d 795 (5th Cir. 2000).

6Title II of the ADA provides that “no qualified individual shall, by reason of such disability, be denied the benefits of the services, programs, or activities of a public entity, or be subject to discrimination by any such entity.” 42 U.S.C. § 12132.

7That National Institute of Mental Health: www.nimh.nih.gov

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