

ISSUE | 1

JULY 2023

# THE REP

THE RESEARCH, EDUCATION, & PRACTICE  
MAGAZINE FROM THE FIRST CENTER

## EMS RUN SURVIVAL

Learn about the workplace  
violence prevention course  
being developed by FIRST  
and the IAFF

## MOVING THE NEEDLE ON DEI

Hear about our work to  
make the fire service more  
diverse, equitable, and  
inclusive

## FIRE FELLOWS

Meet the next generation of  
fire and rescue service  
researchers



## ABOUT THE COVER

The FIRST Center is proud to work with Canadian photographer and paramedic Daniel Sundahl ([www.dansungallery.com](http://www.dansungallery.com)). His work reflecting the jobs, lives, hopes, and fears of first responders is instrumental for PTSD and mental health awareness. His evocative images are used to amplify our research, education, and practice impact.

# IN THIS ISSUE

## A LETTER FROM THE DIRECTOR

Dear Friends of FIRST,

Welcome to our FIRST magazine, *The REP*.

REP stands for research, education, and practice—the ethos of the FIRST Center. We are not only here to conduct research, but we care about it reaching the community—meaning the fire and rescue service. We do this by creating assessments and policies, analyzing resultant data, and educating you on the power of data for objective decision-making about organizational change.

All of our work at the FIRST Center is inspired by the 16 National Life Safety Initiatives. It is important for you to know that public health scientists take their marching orders *from* community. We do research *with* the fire service, not *on* the fire service. By regarding *your* research agenda, we are able to help you attain the advances you want to make in health and safety.

We are proud to be part of the larger community of fire and rescue service researchers. Our REP focuses on safety culture assessment, injury prevention and control, mental health and well-being, workplace violence, and diversity, equity, and inclusion. Our policy work continues to advocate for the inclusion of occupation and industry data elements in healthcare claims data and the implementation of model policies to prevent stress and violence in the workplace. We consider policy to be the strongest tool in the FIRST Center's toolbox.

Even though this is our first magazine, we've been working with the fire and rescue service since 2007. In this inaugural issue, you will see many of the activities that make me proud to serve as FIRST's founding director.

Yours in Safety,



## 10 Current Projects

Learn about our fire service research and interventions

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Meet our doctoral students and FIRE Fellows

## 27 On the Road

Hear about what the rest of 2023 has in store for FIRST and how you can get involved

# ***MEET THE TEAM***

**The Center for Firefighter Injury Research and Safety Trends (FIRST) is a research, education, and practice enterprise. We do research *with* the fire service, not *on* the fire service, and this fundamental ethos of partnership compels us to continuously share our work in progress. We are a team of university faculty, staff, and students, standing ready to support the US fire and rescue service through objective data collection and analysis.**





**Jennifer Taylor, PhD,  
MPH, CPPS**  
*Director*

Dr. Taylor is the Arthur L. and Joanne B. Frank professor of environmental and occupational health at the Drexel University Dornsife School of Public Health. She has been trained in the field of injury prevention and control and uses its principles to address safety issues among first responders. She received a BS in Biochemistry from Albright College, an MPH in Health Services from the Boston University School of Public Health, and a PhD in Health Policy & Management from the Johns Hopkins University Bloomberg School of Public Health. She is a Certified Professional in Patient Safety.



**Andrea Davis, MPH, CPH**  
*Associate Director*

Ms. Davis oversees the daily operations of the FIRST Center, including all research grants and contracts as well as management of staff and students. She serves as the qualitative data expert for the research team. She authors and presents on safety culture projects and research across the country. She received a BA from the University of Delaware, an MLA from the Harvard Extension School, and an MPH in Environmental & Occupational Health from the Drexel University Dornsife School of Public Health.



**Alexandra Fisher, MPH, CHES**  
*Project Manager of Education &  
Training*

Ms. Fisher leads curriculum development and evaluation efforts at the FIRST Center. She also assists with recruitment and retention efforts for research projects, keeping in close contact with study partners and participants. She received a BS from the University of South Florida and an MPH in Community Health & Prevention from the Drexel University Dornsife School of Public Health. She is also a Certified Health Education Specialist.



**Crystal Yates-Gale, MBA**  
*Diversity, Equity, & Inclusion  
Project Manager*

Ms. Yates-Gale oversees the FIRST Center's DEI efforts, including the development of the DEI FIRE Toolkit. She engages with key stakeholders in the fire and rescue service to help move the needle on DEI initiatives in the workforce. She is a 22-year veteran of the Philadelphia Fire Department, serving as the department's first African American female deputy EMS commissioner of finance and administration for two years before retiring. She received a BS from the West Chester University of Pennsylvania and an MBA from the Yale School of Management.



**Victoria Gallogly, MPH**  
Outreach & Communication  
Coordinator

Ms. Gallogly leads outreach and communication efforts. She manages and updates the FIRST Center website, social media, and press, and also assists with daily research activities. She regularly communicates with stakeholders, fire service partners, and media outlets to disseminate news and updates related to FIRST Center research findings, interventions, and opportunities. She received a BS in Public Health and an MPH in Environmental & Occupational Health from the Drexel University Dornsife School of Public Health as part of the accelerated BS/MPH degree program.



**Casper Voyles, PhD, MPH**  
GATHER Post-Doctoral  
Trainee

Dr. Voyles works with the FIRST Center under a partnership with the Urban Health Collaborative (UHC) as a Global Alliance for Training in Health Equity Research (GATHER) fellow. His research is focused on inclusion for sexual and gender minority (SGM) populations in social spaces. His qualitative research expertise informs FIRST's diversity, equity, and inclusion (DEI) research. He received a BA in Psychology and Russian Language & Culture from Colby College and an MPH and a PhD in Community Health & Prevention from the Drexel University Dornsife School of Public Health.



**Ashley Geczik, MPH**  
PhD Candidate

Ms. Geczik is working on her doctorate in Environmental & Occupational Health at the Drexel University Dornsife School of Public Health. Under the mentorship of Dr. Taylor, she is investigating the effects of safety climate on organizational outcomes like job satisfaction and injury risk in the fire and rescue service. She is the daughter of a 9/11 disaster recovery worker. She received a BS in Biology from Loyola University Maryland and an MPH in Epidemiology with a certificate in Chronic Disease Epidemiology from the Columbia University Mailman School of Public Health.



**Madison Raposa, MS**  
PhD Student

Ms. Raposa is working on her doctorate in Environmental & Occupational Health at the Drexel University Dornsife School of Public Health. With Dr. Taylor as her mentor, her research focuses on the effects of the COVID-19 pandemic on the mental health and well-being of first responders. She is the daughter of a lieutenant from the New Bedford Fire Department in Massachusetts. She received a BA in Health Science from Stonehill College and an MS in Population Health Research with a concentration in Epidemiology from Boston University.





**Arianna Hall**  
MPH Student

Ms. Arianna Hall is working on her masters in Community Health & Prevention at the Drexel University Dornsife School of Public Health. She is working on her master's thesis with Dr. Voyles to further our DEI initiatives through the development of DEI FIRE - a toolkit that will give the fire and rescue service the resources it needs to become a more diverse, equitable, and inclusive workforce. Ms. Hall received a BA in Anthropology from The Pennsylvania State University and will receive her MPH in June of this year.



**Joseph Allen, PhD**  
Professor of Industrial &  
Organizational Psychology

Dr. Allen is an industrial and organizational psychologist at the University of Utah Health and the director of the Center for Meeting Effectiveness at the Rocky Mountain Center for Occupational and Environmental Health. His research focuses on the science of workplace meetings, organizational community engagement, and occupational safety and health. He counsels the FIRST Center on interventions aimed at improving fire and rescue department safety culture. He received a BS in Psychology from Brigham University and an MA in I/O Psychology from the University of North Carolina at Charlotte.



**Sherry Brandt-Rauf, JD, MPhil**  
Associate Teaching  
Professor of Environmental  
& Occupational Health

Ms. Brandt-Rauf is an associate teaching professor at the Drexel University Dornsife School of Public Health. She is a lawyer and a sociologist with expertise on environmental and occupational law at the federal, state, and local levels. Her work with FIRST involves conducting an inventory of state laws and statutes aimed at presumptive legislation related to mental and physical injuries experienced by firefighters and EMS responders. She received a BA in Sociology from Barnard College, an MA and an MPhil in Sociology, as well as a JD, from Columbia University.



**Arthur Frank, MD, PhD**  
Professor of Environmental  
& Occupational Health

Dr. Frank is a professor of Environmental & Occupational Health at the Drexel University Dornsife School of Public Health. His research focuses on occupational lung diseases and cancers. His expertise informs the FIRST Center's approach to studying and improving safety culture as a means of chronic disease prevention among firefighters and EMS responders. He received a BA in Anthropology from State University of New York at Buffalo, a PhD in Biomedical Sciences from the City University of New York Mount Sinai Medical Center, and an MD from the Mount Sinai School of Medicine.



**Jin Lee, PhD**  
Associate Professor of  
Psychological Sciences

Dr. Lee is an associate professor in the Department of Psychological Sciences at Kansas State University. His research focuses on workplace safety climate, health, and well-being. Specifically, his expertise in safety climate assessment and management in high-risk industries directly informed the development of the FOCUS survey and our safety culture interventions, like the Safety Leadership Walkaround (SLWA). He received a BS in Psychology and an MA in Clinical Psychology from Yonsei University in South Korea and a PhD in I/O Psychology from the University of Connecticut.



**Christian Resick, PhD**  
Associate Professor of  
Management &  
Organizational Behavior

Dr. Resick is a professor of Management & Organizational Behavior at the Drexel University LeBow College of Business. His research focuses on organizational leadership and how leaders can include the norms, climates, and cultures of an organization. His work informs our FOCUS survey and interventions focused on giving fire and rescue service leaders the tools they require to leverage their influence in a department and create positive change. He received a BS in Management from Saint Francis University, an MA in I/O Psychology from West Chester University, and a PhD in I/O Psychology from Wayne State University.





# ***SPREADING THE WORD***

**The FIRST Center presents at numerous fire service and academic events, both virtually and in-person across the country, to share our research, education, and practice. Local and national media partners aid in the dissemination of our work, and measurement of its impact.**



# CONFERENCES & PRESENTATIONS

## **Fire Department Safety Officers Association Health & Safety Conference**

*January 17, 2023 | St. Pete Beach, FL*

"DATA, DATA, DATA: How Fire Departments are Improving  
Safety Culture & Mental Health"

## **International Firefighter Cancer Symposium**

*February 23 & 24, 2023 | Miami, FL*

"Safety Culture & Cancer: Evaluating the Relationship Between  
Safety Behaviors & Safety Climate in US Fire Departments"

## **Delta Omega Innovative Curriculum Webinar**

*March 2, 2023 | Virtual*

"Firefighter Injury Research, Epidemiology, & Evaluation (FIRE)  
Fellowship"

## **Society for Advancement of Violence & Injury Research Annual Meeting**

*April 17 - 19, 2023 | Denver, CO*

"Descriptive Analysis of Safety Climate & Self-Reported  
Injuries Among Respondents to the FOCUS 1.0 Survey"

## **European Diversity Conference for the Strategic Leadership of the European Fire & Rescue Services**

*April 25, 2023 | Copenhagen, Denmark*

"Making the DEI Roadmap & Toolkit for the US Fire Service: The  
Process & The Plan"

## **Patient Safety Evaluation Virtual Summit**

*May 9 & 10, 2023 | Virtual*

"Workplace Violence: Reporting & Policy  
Innovations"

## **The Johnson Foundation at Wingspread**

*May 10 -12, 2023 | Racine, WI*

"Advancing Diversity, Equity, & Inclusion in Fire & Emergency  
Services"

## **Nerdstock: Unplugged**

*May 19, 2023 | Virtual*

"Safety & Gear: Fire Department Safety Culture  
& Mental Health"

# FIRST IN THE NEWS

Click on each story to read more

## **The USFA Podcast: Fire Service Diversity, Equity and Inclusion with Teresa Neal**

*The USFA Podcast  
October 20, 2022*

## **Resource offers model policies for protecting fire-based EMS workers from violence**

*Safety + Health Magazine  
January 25, 2023*

## **Delta Omega Innovative Curriculum Award Webinar - March 2**

*Association of Schools & Programs in  
Public Health  
February 23, 2023*

## **FIRST selects 8th class of FIRE Fellows**

*FireRescue1  
March 22, 2023*

## **FIRST hires former Philadelphia FD EMS commissioner to lead DEI effort**

*FireRescue1  
March 22, 2023*

## **The Spotlight: A disturbing 930% rise in assaults on Seattle firefighters**

*FOX13 Seattle  
April 4, 2023*

# ***CURRENT PROJECTS***

**The FIRST Center has been continuously funded through grants and contracts since 2007. In that time, we conducted research and moved it to practice in accordance with our mission to support the National Life Safety Initiatives. In the last year, workplace violence prevention; safety climate and mental health; and diversity, equity, and inclusion were top priorities.**



# PROTECTING THE PROTECTORS

## FROM WORKPLACE STRESS AND VIOLENCE

Our [Stress and Violence to fire-based EMS Responders \(SAVER\)](#) project examined workplace violence (WPV) against firefighters, paramedics, and EMTs and produced interventions to protect them on the job.

The SAVER [Systems-Level Checklist](#) and [Model Policy](#) interventions shift the onus of safety and health from the individual first responder to the department itself.



The Checklist focuses on department-level changes leadership can make through training and policy. The most feasible items in the Checklist were codified into the 8 SAVER Model Policies that are ready for implementation today.

Collaborators on the papers included Lieutenant Robert Borse from Dallas Fire-Rescue, Lieutenant Diane Pellechia from the Philadelphia Fire Department, Battalion Chief David Picone from San Diego Fire-Rescue, representing numerous

fire and rescue service organizations.

Building on the success of the SAVER project, FIRST partnered with the [International Association of Fire Fighters](#) (IAFF) to develop the **Workplace Violence Prevention for First Responders** course. Delivered in an online format, this course gives individual firefighters, paramedics, and EMTs the skills and knowledge they need to prevent a violent event from occurring or to diffuse a situation when it escalates.

The course begins with Chapter 1, describing why this course is needed. It centers around testimony from firefighter-paramedic Benjamin Vernon and firefighter-EMT Kelly Adams, who were seriously injured on the job.

Chapter 2 provides background information on the scope of WPV against EMS responders, definitions of WPV, and how the burdens and stressors of EMS work are exacerbated by experiencing violence on the job.

Chapter 3 teaches first responders how to conduct a "self size-up"—checking in with themselves and their partner or squad to ensure everyone is well-prepared before going on a run or approaching the scene.

Chapter 4 explains how to conduct a "scene size-up."



up.” Building on BSI and scene safety, this chapter focuses on specific environmental and patient or bystander predictors of violence.

Chapter 5 focuses on cultural humility—understanding and accepting that many identities exist that are different than your own. Patients and bystanders who feel safe and respected will be more likely to cooperate and less likely to act violently.

Chapter 6 teaches first responders warning signs of aggression and action steps they can take to de-escalate the situation. If de-escalation is not possible, the importance of exiting the scene is emphasized.

Chapter 7 covers what first responders should do after they have experienced WPV on a call. This includes seeking treatment for injuries, reporting the event, and receiving support while interfacing with the legal system.

Chapter 8 is optional and discusses the gaps in WPV prevention and workers' compensation policies. It describes how department and union leadership can implement the Model Policies to protect their employees from WPV and stress.

While this course was developed for the fire and rescue service, its content will be useful for many other public-facing industries, like healthcare workers and police.

Next up for FIRST and the IAFF is a complementary practical course that will include de-escalation training, giving first responders the opportunity to practice skills they learned in the online course in a simulated work environment.

First responders protect their communities every single day. Now, the **Workplace Violence Prevention for First Responders** will help them protect themselves and each other.

## FOR YOUR DEPARTMENT

**WPV is a persistent workplace hazard for fire and EMS responders.**

- Between 57 and 97% of first responders experience verbal and/or physical violence at least once, with verbal violence being the most common form
- In a national study of US EMTs, 8% of workplace fatalities were due to assaults
- Paramedics have a 14-fold higher odds for experiencing a violent injury than their firefighter colleagues

WPV impacts fire and EMS responders' lives and mental health, adding to an already stressful job.

Fire departments and EMS organizations can protect their membership **IMMEDIATELY** by implementing the **SAVER Model Policies**, developed by over 50 fire and rescue service experts from departments, unions, and national organizations.

For more information about how the Model Policies can keep YOUR Members safe, contact Dr. Jennifer Taylor, FIRST Center Director ([jat65@drexel.edu](mailto:jat65@drexel.edu)) and scan the QR code to stay up-to-date on FIRST Center WPV news.



The SAVER project was funded by the Federal Emergency Management Agency (FEMA) FY 2016 Assistance to Firefighters Grant Program, Fire Prevention and Safety Grants (Research & Development); Grant number: EMW-2016-FP-00277.



The WPV Prevention for First Responders Course was funded by a contract from the International Association of Fire Fighters (IAFF) through its grant from the Federal Emergency Management Agency (FEMA) Assistance to Firefighters Grant Program/2020 Fire Prevention and Safety Grants Program; Grant number: EMW-2019-FP-00096





# FOCUSING ON SAFETY CULTURE AND MENTAL HEALTH

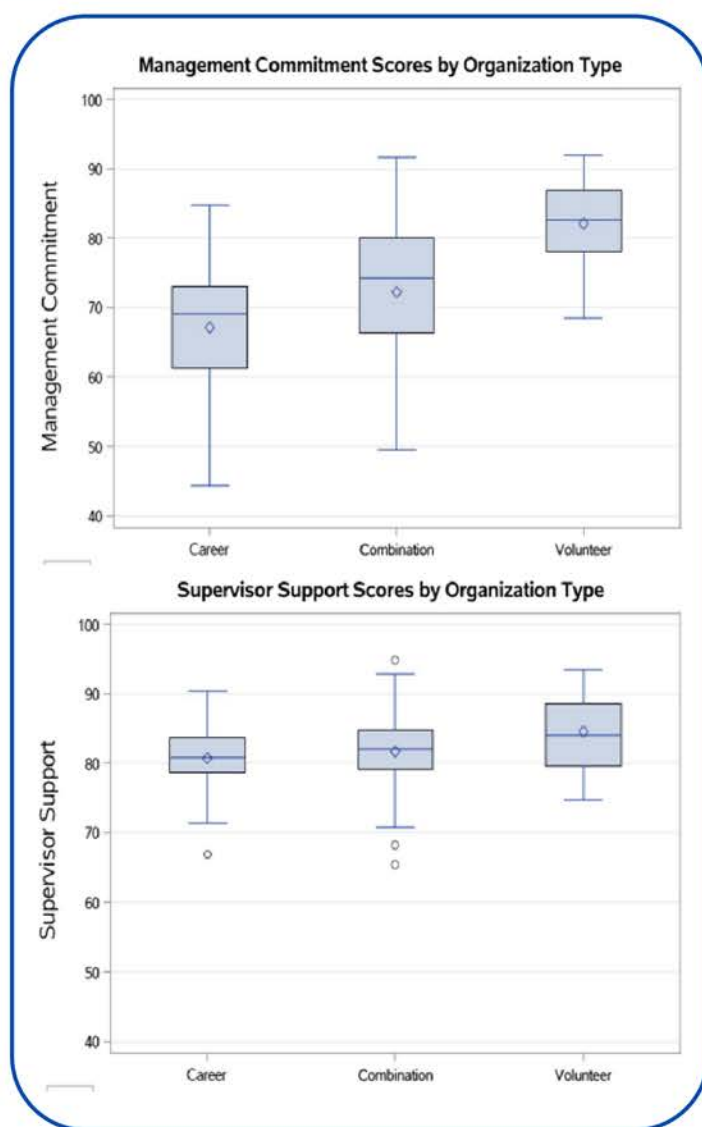
The [Fire service Organizational Culture of Safety](#) (FOCUS) survey is now in its fourth wave—FOCUS 3.0. Based on fire service feedback, the survey has been expanded to include enhanced leadership and mental health modules. By the end of 2023, over 748 departments and 92,400 firefighters will have assessed with FOCUS.

Safety culture is a robust predictor of occupational injuries, burnout, job satisfaction, and work engagement. Analysis of the FOCUS 3.0 wave will enable research on the impact of safety climate on mental health.

**Did you know that size really does matter?** FIRST PhD candidate Ashley Geczik, MPH, published in [Injury Epidemiology](#) analyzing data from the FOCUS beta-test (2012-2016).

Results showed that supervisor support for safety was 10 points higher on average than management commitment to safety. Furthermore, management commitment to safety varied by fire department organization type, with career departments scoring lower than volunteer departments.

Overall, as fire departments get larger in size and more complex in structure, members may be at risk if new ways of communicating safety as a priority are not implemented.



FOCUS 3.0 incorporates mental health metrics used on our [COVID-19 RAPID Mental Health Assessment](#) (RAPID)—a six-month study conducted from May to October of 2020 to measure the effects of the coronavirus pandemic on mental health and well-being of 20 fire and rescue departments across the country.

Three manuscripts were recently released detailing results from the RAPID study. The first, published by FIRST PhD student Madison Raposa, MS, in the [Journal of Occupational and Environmental Medicine](#), indicates significant decreases in first responder mental health resulting in declines in workplace support.

Lacking communication from leadership, combined with little ability to advocate during decision-making processes, led to higher burnout, anxiety, depression, and the desire to leave EMS work.

In essence, the pandemic exacerbated the multitude of problems already present in a workforce that is constantly being asked to do more with less.

The second study, also published in the [Journal of Occupational and Environmental Medicine](#) by University of Utah PhD student Katherine Castro, MPH, analyzes qualitative narratives collected from focus groups of first responders that participated in the RAPID study.

First responders revealed that job demands of the pandemic ranged from changes in daily operations aimed at limiting viral transmission to increased mental fatigue regarding COVID-related restrictions.

*"By nature, we [are] doers and problem solvers. So, for parts of crews to stay outside [of the patient's house] to really do nothing is pretty difficult."*

Work-life demands first responders encountered included burdens like isolation from their families and seeing their families less due to working longer shifts.

*"I do think everybody's biggest concern here is, nobody wants to take [the virus] home."*

Departments provided resources related to both changing job demands and concerns associated with work-life balance, but firefighters perceived that greater emphasis was placed on addressing the former.

*"The chief has made a commitment, you know, we have all of the supplies that we need, including shields, N95 masks, gowns for EMS personnel."*

**OUT OF 700  
RESPONDENTS...  
420 FELT  
EXHAUSTED BY THE  
PANDEMIC  
218 WERE AFRAID  
OF GIVING THE  
VIRUS TO THEIR  
FAMILY & FRIENDS  
205 FELT  
OVERWORKED**

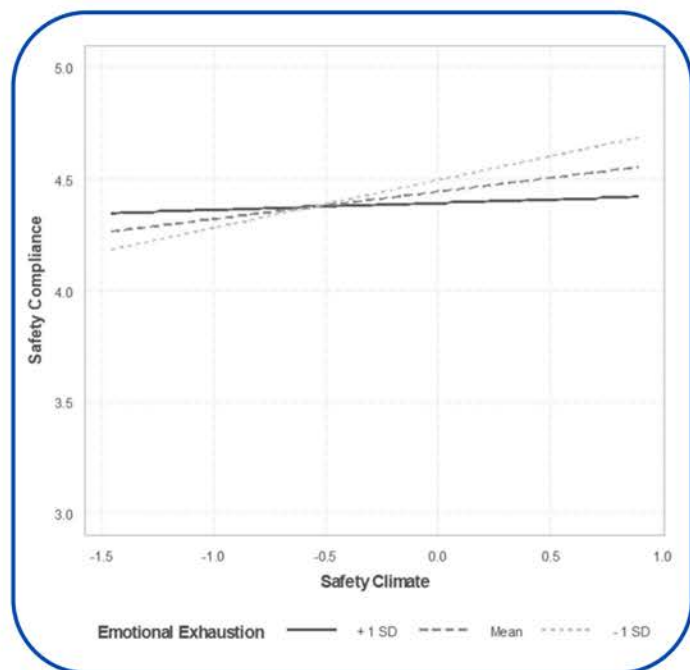


These findings underscore the fire service's preparedness to respond to work environment needs during an unprecedented time, but shines a light on gaps in supporting first responders and their families during times of crisis.

*"I didn't struggle with [the effects of the pandemic] too bad because I always saw my second family every day at work."*

The third study, published in the [Journal of Business and Psychology](#) by FIRST affiliate faculty member Jin Lee, PhD, examined the pandemic's effect on the well-being of first responders, specifically in three metropolitan fire departments that participated in the RAPID study.

Findings show departments experienced high levels of emotional exhaustion—a key component of burnout—which led to decreased morale, increased risk for depression, and a lack of adherence to safety protocols.



However, this research also found that improving safety climate works to boost morale and limit the risk for depression, even when first responders are burnt out.

## FOR YOUR DEPARTMENT

### FOCUS as a Tool

FOCUS is a safety climate tool developed specifically for the US fire and rescue service in response to National Life Safety Initiative #1—defining and advocating the need for a cultural change within the fire service.

### What FOCUS Measures

- Safety climate: Measurable aspects of safety culture (leadership commitment to and support for safety)
- Safety outcomes: Injuries, near-misses, line-of-duty deaths
- Organizational outcomes: Burnout, job satisfaction, work engagement
- Mental health outcomes: Anxiety, depression, suicidal ideation

### Why FOCUS Matters:

You can't manage what you can't measure. Knowing your department's safety climate tells you how you can help keep your members safe.

**Interested in measuring YOUR department's safety culture? Scan the QR code to enroll.**



Questions? Contact Alex Fisher, MPH, CHES ([abt57@drexel.edu](mailto:abt57@drexel.edu))

The RAPID study was funded by a grant from the Drexel University Board of Trustees and Office of Research & Innovation COVID-19 Rapid Response Research & Development Awards and a matching donation from Dr. Arthur Frank, Chair Emeritus of Drexel's Department of Environmental and Occupational Health.



The FOCUS survey was funded by a contract from the Fire Department Safety Officers Association (FDSOA) through its grant from the Federal Emergency Management Agency (FEMA) Assistance to Firefighters Grant Program/2020 Fire Prevention and Safety Grants Program; Grant number: EMW-2020-FP-00980.





# **MOVING THE NEEDLE ON DIVERSITY, EQUITY, AND INCLUSION**

In 2023, we were awarded a FEMA Assistance to Firefighters (AFG) Fire Prevention & Safety (FP&S) grant to develop "DEI FIRE"—a toolkit with education, assessment, and training materials to help the fire and rescue service achieve its vision of [diversity, equity, and inclusion \(DEI\)](#).

This work is in partnership with the Metropolitan "Metro" Fire Chiefs Association, who prioritized DEI initiatives through a policy statement adopted at the Urban Fire Forum in September of 2022.

To manage our new FEMA grant, we welcomed Crystal Yates-Gale, MBA, as the DEI Project Manager.

Yates-Gale is a 22-year veteran of the Philadelphia Fire Department. She began her career as a paramedic and served as the department's first female African American deputy EMS commissioner. She recently retired from PFD and begins a new venture as FIRST's DEI Project Manager.

Yates-Gale is a long-time partner of the FIRST Center. As deputy EMS commissioner, she educated the Firefighter Injury Research, Epidemiology, and Evaluation (FIRE) Fellows about her role, including how her identity as a Black female firefighter impacted her personal and professional life.



She was also deeply engaged with the SAVER portfolio, including the development of the Systems-Level Checklist and the Model Policies. During the pandemic, she facilitated PFD's involvement in the RAPID Assessment.

Now, as DEI Project Manager, Yates-Gale is overseeing the creation and implementation of the DEI FIRE Toolkit.

Yates-Gale was selected for this role not only



of her fire service experience, but also for her commitment to advancing DEI goals in the industry. With her leading the development of the Toolkit, we will foster collaboration, learning, and compassion to move the needle on fire service DEI goals.

This toolkit will address resource gaps that limit the fire and rescue service in making the changes it envisions.

DEI FIRE will be made available through an online clearinghouse to centralize information. Fire and rescue departments across the nation can access this resource for free.



The development of the Toolkit will take place over two years. Resources will appear on the [DEI section](#) of the FIRST Center website as they become available.

A great example is the [LGBTQ Resource Guide for EMS](#) that provides first responders with knowledge of how to interact with LGBTQ patients in a way that provides them with optimal and respectful care.

The Guide includes an LGBTQ glossary with definitions of terms commonly used when discussing LGBTQ issues. Acronyms like PERSoNAL prompt first responders to think about how to give their patients the best possible care.

The Guide also includes a practical component—

case studies of situations where EMS responders are interacting with members of the LGBTQ community. Each scenario has a dialogue and after action review to help frame the contents of the Guide as practical for use in the field.

Departments can download the LGBTQ Resource Guide for their membership to use and evaluate through an after-action survey link included in the document.

With tools like the LGBTQ Resource Guide and others included in DEI FIRE, the fire and rescue service can work toward becoming a more diverse, inclusive, and equitable industry.

## FOR YOUR DEPARTMENT

**The DEI FIRE Toolkit is a work in progress.**

While FIRST Center researchers can speculate on tools, resources, and trainings that work best for the fire and rescue service, the best way to know for sure is to **hear it from YOU**.

We are looking for fire and rescue service members from all ranks to share their thoughts about components of the Toolkit.

The LGBTQ Resource Guide for EMS is already available for use. It includes a glossary of LGBTQ terms, acronyms to help responders learn the aspects of informed care, and case studies that provide examples of how information included in the Guide can be used practically on an everyday EMS call.


Interested in implementing the LGBTQ+ Resource Guide in YOUR department? Scan the QR code to download or contact DEI Project Manager Crystal Yates-Gale, MBA ([cay43@drexel.edu](mailto:cay43@drexel.edu)).



The DEI FIRE Toolkit is funded by the Federal Emergency Management Agency (FEMA) Assistance to Firefighters Grant Program/2022 Fire Prevention and Safety Grants Program; Grant number: EMW-2021-FP-00070.



# ***STUDENT SPOTLIGHT***

The background of the page is a faded image of two young women standing in front of a fire truck. The woman on the left is wearing a dark blue polo shirt and jeans, with sunglasses on her head. The woman on the right is wearing a dark blue paramedic uniform with a 'PARAMEDIC MEDIC 46' patch on the chest. The fire truck behind them has '46' on its side and a circular seal that reads 'PENNSYLVANIA DEPARTMENT OF HEALTH 51025'.

**At the FIRST Center, we mentor and train students in public health research and practice with the goal of creating the next generation of fire service researchers. The FIRE Fellowship trains master's and doctoral students, fostering their learning and professional development to support fire and rescue service research.**



# DOCTORAL DEDICATION

Madison Raposa, MS (bottom left), and Ashley Geczik, MPH (bottom right), are two students at the Drexel University Dornsife School of Public Health being mentored by Dr. Jennifer Taylor, FIRST Center director, as they pursue their PhDs in Environmental and Occupational Health.



As a PhD candidate, Geczik is focusing on completing her research in preparation for her final defense in the spring of 2024. She is examining organizational safety climate—the shared perceptions of first responders regarding their department's safety protocols—and its association with occupational diseases prevalent among firefighters.

This past year, as she was working to complete her doctoral coursework, she conducted research using beta-test data from the FOCUS survey to study the difference in safety climate based on department size. Her research revealed that

career departments often have lower safety climate scores than their combination or volunteer counterparts. This work, published in the *Injury Epidemiology* journal, has been featured at several FIRST Center conferences and presentations and has become a prime example of the work FIRST Center students can accomplish.

*"Each day that I sit down for work, I know that I am doing this work for the US fire and rescue service"*

As the daughter of a 9/11 World Trade Center disaster worker, Geczik sought out the opportunity to work with FIRST for her doctoral training because of our focus on first responder health and safety. She is passionate about giving back to a community of workers that does so much for the populations they serve.

During her time with FIRST, Geczik has not only had the opportunity to conduct important data analysis—she has also engaged directly with fire and rescue departments, hearing from leadership about their concerns and working with them to develop the newest iteration of the FOCUS survey.

"I find joy in answering research questions that originate from our fire service partners," she says.



"Each day that I sit down for work, I know that I am doing this work for the US fire and rescue service."

Raposa is completing her doctoral coursework and will be defending her research proposal in summer 2023. Her thesis will analyze the impacts of work environment on the mental health and well-being of first responders.

In 2022, Raposa led research examining the effects of the COVID-19 pandemic on mental well-being among firefighters and EMS responders. Her work, published in the *Journal of Occupational and Environmental Medicine*, revealed that well-being decreased in a workforce that was severely impacted by ever-changing job conditions and other work-related stressors caused by the pandemic. Raposa's study is yet another example of the monumental research efforts that are spearheaded by students of FIRST.

### *"Being a part of the FIRST Center team has been game-changing for me thus far"*

As a budding public health professional, Raposa's experience at Drexel University working with FIRST has increased her confidence in her skills and knowledge. "I have had the opportunity to engage with important stakeholders, experience what happens behind the scenes of conducting research, and learn how to use my skills to solve real-world problems in the fire and rescue service," she says.

Both Geczik and Raposa have an optimistic outlook for their futures as public health practitioners once they finish their doctoral training.

"I am a work in progress," Geczik says, "but I am grateful to have the support of my FIRST Center colleagues as I continue to build these skills."



Raposa echoed this sentiment, saying, "Being a part of the FIRST Center team has been game-changing for me thus far and I am excited to see where the next couple of years takes me."

"My work with the fire and rescue service will hopefully not end with my time here as a doctoral student," Geczik adds.

Both Geczik and Raposa expect to complete their doctoral studies within the next few years and are eager to discover where their post-doctoral professional journeys will take them.

Geczik received a Bachelor of Science in Biology from Loyola University and a Master of Public Health in Epidemiology with a Certificate in Chronic Disease Epidemiology from Columbia University.

Raposa received a Bachelor of Arts in Health Science from Stonehill College and a Master of Science in Population Health Research with a focus in Epidemiology from Boston University.



# FOSTERING FELLOWSHIP

From June to August of 2022, we led the 7th annual [Fire service Injury Research, Epidemiology, and Evaluation \(FIRE\) Fellowship](#). This [award-winning](#) program is a full-time, paid, 400-hour research and professional development experience that immerses students into the world of fire service research and practice.

Fellowship recipients, known as "FIRE Fellows," include undergraduate, graduate, and doctoral students, as well as alumni from the Drexel University Dornsife School of Public Health.

[Last summer](#), students Eboni Pelzer, MPH, Inaya Wahid, MPH, and Yazid Barhoush, MPH, advanced the development of our WPV prevention curriculum for fire-based EMS responders in partnership with the IAFF.

They researched and developed chapters related to cultural humility and de-escalation tactics, both of which are vital for helping EMS responders prevent a violent event from occurring or diffusing a situation when it does.

This work was a continuation of progress the 2021 class of FIRE Fellows made in developing the first iteration of the WPV course. Pelzer, Wahid, and Barhoush added to the curriculum, consulting academic and industrial literature on de-escalation tactics and trauma-informed care.





# MEET THE FELLOWS

Eboni Pelzer, MPH, received her master's degree in 2022 with a concentration in Epidemiology & Biostatistics. As the daughter of a Philadelphia firefighter, Pelzer connected strongly with members of the fire and rescue service.

*From her work on the WPV prevention course, she learned that, "Violence is part of the job - just not an acceptable part."*



Inaya Wahid, MPH, received her master's degree earlier this year with a concentration in Epidemiology & Biostatistics.

*"The most important lessons I have learned from the Fellowship have been the most unexpected ones," she said. "They were not about data analysis or synthesizing literature - rather, they were about how to effectively and empathetically work with others."*



Yazid Barhoush, MPH, also received his master's degree this year with a concentration in Epidemiology & Biostatistics. As an international student from Palestine, Barhoush gained extensive knowledge about the US fire and rescue service over the course of the Fellowship.

*When reflecting on the experience, he said, "The Fellowship changed by lens from sympathy to empathy toward EMS and firefighters."*





# REFLECTION EVENT

At the end-of-summer Reflection Event, the Fellows presented their work to members of the fire and rescue service, their academic colleagues, and friends and family.

Fire service members and leaders attended, including keynote speakers Commissioner Adam Thiel of the Philadelphia Fire Department, Captain Robert Borse from Dallas Fire-Rescue, Captain Robert McClintock, Deputy Director of Fire & EMS Operations at the IAFF, and Chief Peter Burke from the Hyannis Fire Department.



Adam K. Thiel  
@ThielAdam

Great afternoon @drexelpubhealth with @getthedatafirst/  
@PhillyFireDept Fellows briefing their research projects & career goals!



3:12 PM · Aug 25, 2022

*Commissioner Thiel,  
a longtime FIRST  
Center partner,  
delivered a keynote  
speech and  
congratulated the  
Fellows on social  
media.*

# INCOMING CLASS

Now, the 8th class of the FIRE Fellowship will continue this work and engage with up-and-coming FIRST Center projects to further our research, education, and practice initiatives.

Students Mobolawa Adio, MPH(c), Asha-Leigh Ashton, MPH(c), Sumbul Murtaza, MPH(c), Bikiltu Dirbaba, MPH(c), and Eamonn McCollough, MPH(c), will contribute to the WPV prevention course, the DEI FIRE Toolkit, and evaluation of a cultural humility course for EMS designed by the State of Maine EMS System.

Adio is an accelerated BS/MPH student beginning her master's degree in Community Health and Prevention in the fall of 2023. After participating in the Fellowship in 2021, she is excited to be a FIRE Fellow for the second time. She is eager to contribute to development of the LGBTQ+ Resource Guide for EMS.

Ashton is pursuing her master's degree in Environmental and Occupational Health. Originally from Kingston, Jamaica, she has a professional background in environmental health and safety (EHS) and industrial hygiene. She looks forward to evaluating the State of Maine's EMS course.

Murtaza is an international Epidemiology student from Pakistan. As a physician, she appreciates the danger any first responder puts themselves through to save lives. She looks forward to continue work on the WPV online course and subsequent in-person training components.



Dirbaba is an international Epidemiology student from Ethiopia. She is eager to work alongside Murtaza on the evaluation and development of the IAFF's WPV prevention course.

McCullough is a Community Health and Prevention graduate student focusing on emergency preparedness, volunteering with the Philadelphia Red Cross Disaster Action Team. With Ashton, he will evaluate the State of Maine's course and suggest improvements that will help educate EMS responders on aspects of cultural humility when caring for patients.

Funding for this year's Fellowship comes in part from a new FEMA AFG FP&S Grant on DEI with continuing support from the IAFF and the FDSOA.

This 8th class will be led by newly promoted Project Manager of Education and Training, Alex Fisher, MPH, CHES.

Fisher joined the FIRST Team in 2019 as a graduate student and participated in the FIRE





Fellowship in 2019 and 2020. She assisted with retention and recruitment for the RAPID Assessment, as well as for the FOCUS survey.

In her new role, Fisher is leading FOCUS 3.0 survey administrations and the development of online Culture Camps, allowing fire service leaders to learn about safety culture and understand their departments FOCUS survey results.

Fisher is also leading the development of the WPV course, all in addition to guiding the Fellows through the 10-week Fellowship program. She will mentor students as they take on the opportunity to work with and serve community partners with real-world data.

Fisher earned her MPH in community health and prevention from the Drexel University Dornsife School of Public Health. Prior to earning her MPH, she was an educator for several years, which

piqued her interest in program administration and evaluation. To bolster her expertise, she became a Certified Health Education Specialist in 2022, as designated by the National Commission for Health Education Credentialing.

In addition to Fisher, the FIRE Fellows are mentored by FIRST Center Director, Jennifer Taylor, PhD, MPH, CPPS, Associate Director, Andrea Davis, MPH, CPH, Outreach and Communication Coordinator, Victoria Gallogly, MPH, Diversity, Equity, and Inclusion Project Manager, Crystal Yates-Gale, and a network of over 30 [FIRE Fellowship Alumni](#).

Under Fisher's leadership, the FIRE Fellows will contribute to the WPV course curriculum development through knowledge integration of cultural humility, de-escalation, and evasive self-defense competencies. They will also engage with DEI concepts to develop and field test the DEI FIE Toolkit with stakeholders in the fire and rescue service.

As for the State of Maine's cultural humility course for EMS responders, Fellows will develop competencies in program evaluation and communication with stakeholders with concise recommendations and improvements that will better educate first responders.

All of this demonstrates the goal of the FIRE Fellowship: to create the next generation of fire and rescue service researchers.

The WPV Prevention for First Responders Course was funded by a contract from the International Association of Fire Fighters (IAFF) through its grant from the Federal Emergency Management Agency (FEMA) Assistance to Firefighters Grant Program/2020 Fire Prevention and Safety Grants Program; Grant number: EMW-2019-FP-00096



The DEI FIRE Toolkit is funded by the Federal Emergency Management Agency (FEMA) Assistance to Firefighters Grant Program/2022 Fire Prevention and Safety Grants Program; Grant number: EMW-2021-FP-00070.





**NOW THAT YOU  
KNOW ABOUT THE  
FIRST CENTER...**

**DO YOU KNOW  
ABOUT YOUR  
DEPARTMENT?**

**DISCOVER YOUR  
DEPARTMENT'S SAFETY  
CULTURE WITH**

**FOCUS**

**SCAN TO LEARN  
MORE & SIGN UP**





# ***ON THE ROAD***




**We're taking our  
research to even  
more conferences  
and presentations in  
2023 - here's where  
we're headed next.**






**Fire Department Safety Officers Association (FDSOA) Annual Health & Safety Conference**  
January 17 & 18  
St. Pete Beach, FL



**Society for Advancement of Violence and Injury Research (SAVIR) Annual Meeting**  
April 17 - 19  
Denver, CO



**European Diversity Conference for the Leadership of Fire and Rescue Services**  
April 24 & 25  
Copenhagen, Denmark




**Patient Safety Evaluation Virtual Summit**  
May 9 & 10  
Virtual




**YOU ARE HERE**  
Next, we're heading to FRI in Kansas City. Stop by our booth and sit in on our presentations!



**Fire Rescue International (FRI) International Association of Fire Chiefs (IAFC) 150th Anniversary Conference**  
August 16 - 18  
Kansas City, MO



**International Association of Fire Fighters (IAFF) Redmond Health & Safety Symposium / Barbera EMS Conference**  
August 21 - 25  
New York, NY







**International Firefighter Cancer Symposium**

*February 23 & 24,  
Miami, FL*



**Delta Omega Innovative Curriculum Awards Webinar**

*March 2, 2023  
Virtual*



**Wingspread - Advancing Diversity, Equity, & Inclusion in Fire & Emergency Services**

*May 10 - 12  
Racine, WI*



**Metropolitan "Metro" Fire Chiefs Conference**

*June 5 - 8  
Columbus, OH*



**Society for Epidemiologic Research (SER) Annual Meeting**

*June 14 - 17  
Portland, OR*





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Officers Association*

# CONTACT US

**Jennifer Taylor, PhD, MPH, CPPS**

*Director*

[jat65@drexel.edu](mailto:jat65@drexel.edu)

267.359.6060

**Andrea Davis, MPH, CPH**

*Associate Director*

[aly25@drexel.edu](mailto:aly25@drexel.edu)

267.359.6059

**Alexandra Fisher, MPH, CHES**

*Project Manager for  
Education & Training*

[abt57@drexel.edu](mailto:abt57@drexel.edu)

954-615-7306

**Crystal Yates-Gale, MBA**

*Diversity, Equity, &  
Inclusion Project Manager*

[cay43@drexel.edu](mailto:cay43@drexel.edu)

267-359-6180

**Victoria Gallogly, MPH**

*Outreach & Communication*

*Coordinator*

[vhg25@drexel.edu](mailto:vhg25@drexel.edu)

267.359.6173

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