Occupational Safety and Health Administration (OSHA), DOL Docket Number: (OSHA-2016-0014)

RE: Request for Information (RFI) Prevention of Workplace Violence in Healthcare and Social Assistance

Executive Summary: Violence Against Emergency Medical Services (EMS) responders

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Submission date: April 6th, 2017

Introduction
Prevention of workplace violence against Emergency Medical Services (EMS) responders is an issue that warrants the attention of agencies capable of enforcing regulatory actions to better protect the health, safety, and overall well-being of EMS responders in the United States. EMS responders (e.g., first responders, EMTs, paramedics, and firefighters) are an understudied and underserved population of healthcare services experiencing increasing rates of violence directed at them from patients, family members, and bystanders.

Objective
We support the development of standards, policies, and interventions to reduce and prevent violence from occurring in the workplace; This submission serves as an appeal to OSHA and supporting agencies to include direct guidelines and recommendations to provide counsel to Emergency Medical Services responders in an effort to reduce the exposure to and impact of violence occurring in the workplace.

Background
With this Executive Summary, we seek to educate about the importance of including EMS responders within the scope that this OSHA action considers. Unlike the hospital setting, workplace violence in the pre-hospital setting presents a particularly unique challenge due to the mobile and unpredictable nature of the work. EMS responders are expected to provide patient care in high-stress, high-risk, and highly variable environments.

The EMS system serves as a critical community-based interface for the population entering the health care system. In the United States, approximately 22 million patients a year receive care through EMS services provided by an estimated 900,000 EMS responders (Maguire, 2013). EMS plays an expanding role in the health of communities and is a crucial public health safety net. As a result of this relationship with communities, the **EMS system inherits and intercepts societies issues before they arrive to the hospital, thereby placing responders at increased risk for experiencing violence at the hands of the very patients they are called to serve.**

Context
In 2014, approximately 2,600 EMS responders were treated in the Emergency Department (ED) for injuries resulting from workplace violence (Center for Disease Control and Prevention, Emergency Medical Services Workers, 2014). Maguire and Smith demonstrated that work-related injuries among EMS responders were three times higher than the national average for all other occupations (B. J. Maguire & Smith, 2013). In regards to occupational fatalities, the rate among paramedics is more than twice the national average for all occupations and is comparable to those of police and firefighters at **12.7 per 100,000 workers per year** (Brian J. Maguire, Hunting, Smith, & Levick, 2002). The rate of non-fatal injuries among US paramedics was 34.6 per 100 full time workers per year, a rate more than five times higher than the national average for all workers (B. J. Maguire, Hunting, Guidotti, & Smith, 2005). In regards to fatal injuries, a retrospective cohort study of nationally registered EMTs in the U.S. found that **8% of fatalities were due to assaults** (B. J. Maguire & Smith, 2013). Tragedy most recently struck the EMS community in March 2017 when Yadira Arroyo, a 14 year veteran of FDNY, had her ambulance commandeered by a career criminal who then struck and killed her with her own ambulance. Situations such as these may be rare occurrences, yet they demand the attention of EMS administrators and governing officials to enact safety measures that may prevent and reduce the number of non-fatal and fatal injuries suffered in EMS.

Types of Violence
In January 2016, Drexel University was subcontracted by the International Association of Fire Fighters (IAFF) under their contract with the Department of Homeland Security/Federal Emergency Management Agency (FEMA) contract number: HSFE20-15-Q-0053 for the Research/Study of Mitigation of Incidence of Violence to Fire Fighters and EMS Responders. This funding allowed for the completion of a systematic literature review on workplace violence mitigation of violence to firefighters and EMS responders. From this literature review, we found that **in studies measuring career prevalence, between 57 and 93% of EMS responders reported having experienced an act of verbal and/or physical violence at least once during their** career (Bigham et al., 2014; Boyle et al., 2007;

Corbett, 1998; Koritsas et al., 2007; Petzall et al., 2011; Pozzi, 1998; Suserud et al., 2002; Thomsen et al., 2000; Tintinalli, 1993). A recent survey conducted using data from the Longitudinal EMT Attributes and Demographics Study (LEADS) collected by the National Registry of Emergency Medical Technicians (NREMT), found that among the 1,789 respondents, **69.0% experienced at least one form of physical and/or verbal violence in the past 12 months** (Gormley et al., 2016). Furthermore, **43.6% experienced one or more forms of physical violence over the same study period** (Gormley et al., 2016).

In EMS violence-related research in the pre-hospital setting, workplace violence is most often categorized as verbal and physical abuse, property damage or theft, sexual harassment, sexual assault, and intimidation (Bigham et al., 2014; Boyle, Koritsas, Coles, & Stanley, 2007; Corbett, 1998; Koritsas, Coles, Boyle, & Stanley, 2007; Mock, Wrenn, Wright, Eustis, & Slovis, 1998; Pozzi, 1998). Acts of violence against EMS responders have been reported as "struck by patient," "punched in the face by a drunkard," "tackled by a large man," and "assaulted by a combative patient" (Taylor et al., 2016).

It is important to note that violence against EMS providers takes on two forms: Unintentional violence and Intentional violence. Unintentional violence arises from compromised patients who may be under the influence, have mental health issues, or existing health conditions that result in aggressive behaviors and actions. Intentional violence is patient-caused violence that is pre-meditated and was intended to cause harm, injury, or death to other individuals. Violence related EMS literature identifies many sources where intentional violence occurs, including overt situations such as bombings, active shooters, domestic violence, gangs, workplace violence, and terrorism, as well as more inconspicuous situations such as 'normal' responses to residences for cardiac events. Each source of violence has a different set of protocols and procedures that responders follow, yet the unpredictable nature of these scenarios often places added danger and pressure upon responders. Responders may rush into a residence to treat a critical patient and find that they have placed themselves in harm's way by not ensuring proper scene safety and reinforcement. There is ample opportunity to create safer practices and procedures that protect responders against the harms experienced as a result of unintentional and intentional violence.

Increasing Exposure

At the heart of this issue, is the reality of a rapidly changing work environment. Each year, the overall call volume place to the EMS system increases dramatically, thereby increasing the risk that EMS responders will be exposed to potentially violent encounters. In 2015, **29 million calls were place to EMS services, a 23% increase from 2014** (NEMSIS, 2015). This increase represents a continually growing trend the in United States. As the number of patient interactions continues to increase, so to does the risk for exposure to violent incidents and the likelihood that providers will incur injury. Few interventions have been targeted to EMS responders, leaving the industry struggling to keep up with the growing demands of the communities they are serving.

In an incredibly untenable staffing practice, our local community partner - the Philadelphia Fire Department- responds to over 1,000 EMS calls per day with only 200 paramedics on the roster, half of whom are on service at any time. We conducted a mixed methods research study with Philadelphia medics that revealed concerning features of the occupation such as underreporting of violence-related incidents, absence of trainings, increased stress, and mental health implications (Taylor, 2016; Drexel 2016).

Underreporting of the issue is a great cause for concern. One of the limitations that we noted from the literature is the perception that assaults are a inherent to the profession and reporting violent incidents implies an inability to perform their job competently (Corbett, 1998). Attitudes such as these have been suggested as a cause for significant underreporting of violence by EMS responders (Pozzi, 1998). A survey of 1500 medical providers in New Mexico found that **56% of EMS respondents stated that violence is "just a part of the job"** (Feiner, 1995). And although a large percentage believe violence is a part of the job, 40% believed that if no one was injured during the incident that there was no need to report (Feiner, 1995). Other studies show higher frequencies, up to 71%, believing that violence is a part of their job (Pozzi, 1998). In a survey of Canadian paramedics, 62% of participants stated that no actions were taken by most paramedics in response to the violent events (Bigham et al., 2014). In that same study, 61% of participants did not report the violence to a superior or authority and 81% did not formally document the occurrence in the patient care report (Bigham et al., 2014). Similarly, one study found that only 31% of all violent encounters were properly mentioned in the paramedic narrative (Mock et al., 1998).

Adding to the problem of violence experienced by EMS responders is the psychosocial impact that violence or the threat of violence can have upon victims of violence and their colleagues. While robust evidence of the expected physical outcomes of violence against EMS responders limited attention is dedicated to the psychosocial impact of experiencing violence in this work. Violence exposure in the pre-hospital setting has been associated with increased levels of stress, fear, and anxiety in EMS responders (Gomez-Gutierrez, Bernaldo-de-Quiros, Piccini, & Cerdeira, 2016). Reviving Responders, our community partner, acquired pilot data from a convenience sample of 4,021 EMS responders across 50 States in 2015. Respondents reported: **85% experienced critical stress, 37.6% contemplated suicide [National Average (CDC)= 3.7 %], 6.6% attempted suicide [National average (CDC)= 0.5%]**, 66% of respondents did not seek help, and Management and Peer support reduced suicidal ideation (Newland et al., 2015).

Stress, Job Satisfaction & Burnout

In addition to the stress incurred from violent exposures, is the stress experienced as a result of exposure to traumatic incidents in the field. **Between 82 and 100% of EMS responders have experienced a traumatic event** (Donnelly & Siebert, 2009). Traumatic events greatly impact the proclivity of EMS responders to develop severe mental health conditions. This is represented by the fact that numerous studies place prevalence rates of **PTSD in EMS responders to be greater than 20%** (Bennett, 2004; Grevin, 1996; Marmar, 1996; Jonsson, 2003; Clohessy, 1999; Newland, 2015).

From our literature review, we found that the exposure to trauma in combination with their mobile workplace (e.g., moving vehicles, difficult terrain, and people's homes) were perceived as uncontrollable features of their profession (B. J. Maguire et al., 2014). Stress is not only linked to exposure to traumatic incidents, but also the monotonous operational characteristics of EMS organizations such as paperwork, lack of administrative support, low wages, long hours, irregular shits, and cynical societal attitudes towards public safety

officers (Boudreaux, Mandry, & Brantley, 1997). **Cumulative stress associated with the monotonous duties or low acuity calls, has led to feelings of desensitization for patients, and their job as a whole** (Cannuscio et al., 2016).

Our mixed methods study, as well as a research from Sweden found that **violent encounters experienced by EMS responders altered the provider patient relationship** (Suserud et al., 2002; Taylor et al., 2016). Evidence weighing the social and economic costs associated with increased violence and burnout in EMS is based mostly upon anecdotal evidence, with no assessments conducted to measure the monetary loss of such violent exposures. Some literature suggest that as violence increases, the need for police backup also increases, thereby increasing response time and delaying potentially critical care to a patient in need (Nordberg, 1992a). Other concerns include altered operations for the private sector of EMS (Nordberg, 1992a). Intent to leave the profession is also a concern. As more EMS responders leave the profession, numerous organizational and patient impacts have been hypothesized including increased costs for training new EMTs and paramedics, greater numbers of inexperienced paramedics serving at any one point in time, and increased error rates committed by new and inexperienced paramedics (Federiuk, 1992; Patterson, Jones, et al., 2010). Increasingly, EMS responders report seeking a job change away from their ambulance role. In many cases, EMS responders have indicated lost interest in fieldwork and have intentions to leave the profession (Bigham et al., 2014).

Policies, Procedures, & Practices

There is limited evidence regarding the availability and effectiveness of interventions designed for preventing and mitigating violence in EMS (Gates et al., 2011). Much of the current violence prevention training that exists consists of generic programs that are not tailored to the unique setting of the patient care provider, and primarily focus on self-defense techniques rather than prevention (Gates et al., 2011). Researchers note the guidelines developed for violence reduction in ED settings do not generalize well to the EMS industry (Corbett, 1998). From this information, there is an obvious need for trainings and interventions to prevent and mitigate violence in EMS.

Conclusion

The findings presented in this Executive Summary serve as an indication that further research, policies, and interventions are needed in order to better identify risk factors for violence, circumstances surrounding violence, and methods to best mitigate violence in EMS so that resources can be properly allocated to protect the health, safety, and well-being of EMS responders. Without effective policies and precautions in place to reduce and prevent the occurrence of violence against EMS responders, the issue will continue to directly impact EMS responders and subsequently the communities they seek to serve. The development of safety standards by OSHA has the potential to reduce risk of injury and fatalities related to violence in the EMS profession.