

**U.S. DEPARTMENT OF HOMELAND SECURITY  
LAW ENFORCEMENT USE OF FORCE SIMULATION EXPERIMENT**

**Background:** Law Enforcement Officers (LEOs), including federal, state, local, tribal, and territorial entities, are increasingly impacted by changing use of force (UoF) polices and calls for “de-escalation.” However, it has yet to be determined if the changes in UoF conditions--including training, policy, practices, and reforms--are effective in curbing excessive UoF or in producing de-escalated interactions. In April 2021, a Simulation Experiment (SIMEX) was conducted for the Department of Homeland Security (DHS) Office for State and Local Law Enforcement to explore the factors and scenarios that contribute to escalating UoF. The overarching goal of the SIMEX stakeholders was to provide data-informed recommendations to all levels of law enforcement that will support the deterrence and reduction of arrest-related fatalities and injuries due to applied force by law enforcement.

**UoF SIMEX – KEY FACTS**

**Goal**

- Provide data-informed recommendations that will support the deterrence and reduction of arrest-related fatalities and injuries due to applied force by law enforcement.

**Stakeholders**

- Executive Sponsor: DHS Office for State and Local Law Enforcement
- Participants: Local, state, and federal law enforcement organizations; civilian oversight and civil rights organizations; mental health organizations
- Research Partners: The Homeland Security Systems Engineering and Development Institute (HSSEDI), George Mason University (GMU).

**SIMEX Dates**

- April 5 – 16, 2021

**SIMEX Overview:** SIMEX is an immersive virtual reality environment that allows real operators (e.g., police officers, mental health professionals, subjects, etc.) to interact within a representative environment to explore the interactions between people and technology. The UoF SIMEX explored five experimental factors hypothesized by SIMEX stakeholders as relevant in deterring and reducing arrest-related fatalities and injuries due to applied force by LEOs during arrest and during detention-related encounters. The factors were (1) whether the subject was armed with a handgun or unarmed; (2) whether the subject appeared to be exhibiting symptoms of psychosis or asymptomatic; (3) whether the subject was physically combative or not physically combative; (4) whether a mental health professional was available for LEO dispatch or unavailable; and (5) whether the skin tone of the subject avatar was light colored (White) or dark colored (Black).<sup>1</sup>



**Summary of Recommendations:** SIMEX 21-3 offered the following overarching recommendations:

1. Reductions in use of lethal force require further investment in training and non-lethal options to improve proficiency levels across a highly complex and demanding profession.
2. Law enforcement (LE) agencies must take steps to foster an organizational culture that values transparency and communication about common sources of internalized stress, such as the constant risk of grave consequences including loss of life, civilian non-compliance, public scrutiny, and UoF decision making.
3. LE agencies should fund and continue investigating collaboration models between LEOs and clinical mental health service providers that allow all participants to utilize their strengths in working with the community without increasing the risk to any individuals.
4. Investment is needed in future research regarding implicit bias and threat detection disparities for historically marginalized and vulnerable populations.



<sup>1</sup> Limitations of the simulated environment precluded any higher fidelity representation of race.