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National Safety Council

WORKPLACE VIOLENCE:
USING TECHNOLOGY TO REDUCE RISK

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National Safety Council, *Work to Zero*

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What "red flags" might an employee exhibit before becoming violent?

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Aurora, IL Henry Pratt Company Shooting
February 15th, 2019

- Lengthy Criminal Record
- History of Violence
- Terminated from Job
- Prior Threats
- History of Erratic Behavior
- Illegal Gun Possession

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In general, we are bad at predicting violence.

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WORKtoZERO
an **nsc** program
Eliminating Fatality Risk with Technology

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What actions or behaviors come to mind when you think of workplace violence?

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Workplace Violence:

Any act or threat of **physical violence**, **harassment**, **intimidation**, or other **threatening disruptive behavior** that occurs at the worksite. It ranges from threats and verbal abuse to physical assaults and even homicide. (OSHA)

- Homicide
- Weapons Violence
- Simple Assault
- Domestic Violence
- Stalking or Harassment
- Bullying
- Emotional/Verbal Abuse
- Intimidation

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Violence is a Leading Workplace Hazard

#	Event or Exposure	# Fatalities	% Fatalities
01	Falls, Slips, Trips	8,789	27.2%
02	Workplace Violence	8,643	26.7%
03	Contact w/ Object or Equipment	7,986	24.7%
04	Exposure to Harmful Substances or Environments	5,690	17.6%
05	Fires and Explosions	1,245	3.9%

U.S. Bureau of Labor Statistics, 2022

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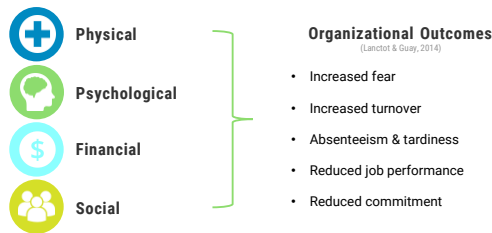
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The Rise of Violence in the United States

Instability	Stress	Behavior

- Inflation
- Economic Uncertainty
- Political Divisiveness
- COVID-19
- International Relations

- 100k Overdoses in 2021
  (CDC, 2021)
- 4.3% Increase in Homicides
  (FBI, 2022)
- 4% Increase in Suicides
  (CDC, 2022)
- 23% Increase in WPV
  (BLS, 2022)

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Four Types of Workplace Violence

Criminal Intent	**Customer/Client**	**Worker-on-Worker**	**Interpersonal**
85% of Fatalities	7% of Fatalities	5% of Fatalities	3% of Fatalities
Perpetrator has no relationship with the employees or organization.	Perpetrator is a client, customer, or patient of the organization.	Perpetrator is a current or former employee, vendor, or contractor.	Perpetrator has a prior relationship with the victim(s).

University of Iowa Injury Prevention Research Center, 2001

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The Consequences are Wide-Spread

Physical

Psychological

Financial

Social

Organizational Outcomes
(Lanctot & Guay, 2014)

- Increased fear
- Increased turnover
- Absenteeism & tardiness
- Reduced job performance
- Reduced commitment

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## Workplace violence drives talented workers to resign.

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Risk Factors for Workplace Violence

Environmental

- Lack of "natural surveillance"
- Work in high-crime areas
- Work in unstable socio-political environment
- Poorly lit worksites
- Work in/near places that serve alcohol
- Lack of communication means
- Long waits, especially in uncomfortable or crowded areas

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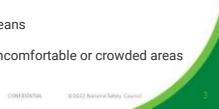
Risk Factors for Workplace Violence

- Public-facing work, saying "no"
- Lone or isolated work
- Work in/around customers' home

Occupational

- Work w/ volatile or unstable individuals
- Work w/ people w/ history of violence or substance abuse
- Handling cash or valuables
- Delivery of passengers or goods

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Risk Factors for Workplace Violence

- Acceptance of workplace violence as "part of the job"
- Chronic labor vs management disputes
- Authoritarian or oppressive management
- Chronic, dangerous work conditions
- Frequent injury claims, especially for psychological stress

Organizational

- Understaffing and/or excessive demands for overtime
- Low employee engagement results

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Do You Need a Prevention Plan?

- **OSHA's** *General Duty Clause:* **Violence is a** *Foreseeable Risk*
  - Failure to recognize and prevent workplace hazards
  - Negligent hiring, retention, or supervision
  - Negligent training
- **Additional Benefits:**
  - Increased feelings of safety (SHRM, 2019)
  - Heightened reporting confidence (SHRM, 2019)
  - Higher levels of employee satisfaction (Aytac & Dursun, 2012)

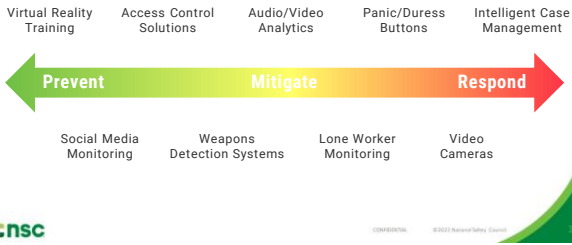**~$350b**
Annual Economic Impact
(AFL-CIO, 2019)

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Elements of a Prevention Plan (OSHA, 2016)

Top-Down Management

Hazard Prevention & Control

Record-Keeping & Program Evaluation

1 2 3 4 5

Worksite Analysis & Hazard Identification

Health & Safety Training

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Workplace Violence Technologies

Virtual Reality Training	Access Control Solutions	Audio/Video Analytics	Panic/Duress Buttons	Intelligent Case Management

Prevent → **Mitigate** → **Respond**

Social Media Monitoring	Weapons Detection Systems	Lone Worker Monitoring	Video Cameras

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Virtual Reality Training

VR training immerses users into a life-like, computer-generated environment via a VR headset or computer display, often with a 360° view.

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VIRTUAL REALITY TRAINING
VERIZON USES VR TO TRAIN EMPLOYEES FOR DANGEROUS SITUATIONS
CBS THIS MORNING

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Social Media Listening

Software which collects, analyzes, and flags public access online conversations about a specific brand, company, topic, keyword, etc.

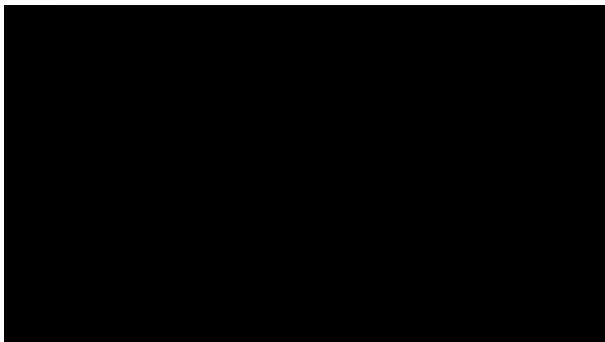**56%** of active shooters shared their intent (FBI, 2014)

4-5 Average number of red flags exhibited by active shooters (FBI, 2014)

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Social Media Listening
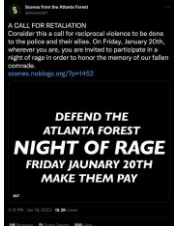
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Access Control Systems

Systems designed to restrict access to a particular building or worksite; often equipped to send an alert of unauthorized or potentially dangerous entries.

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3/21/2023

Weapons Detection Systems

Machine learning or AI-powered Software which collects, analyzes, and flags public access online conversations about a specific, company, topic, keyword, etc.

(Video by Evolv Technology)

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Video/Audio Analytics

Machine learning or AI-powered software which monitors, analyzes and manages video or audio data. Algorithms can be trained to identify a variety of objects, sounds, or actions.

| Visual Signs of Aggression | Crowd Monitoring | Facial Recognition | Audible Signs of Violence | Gunshot Detection | Glass Breaking |

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Lone Worker Monitoring

Technology, oftentimes a mobile app or wearable device, which protects lone workers through real-time GPS tracking, fall detection, and two-way communication capabilities.
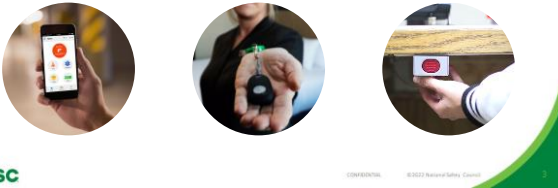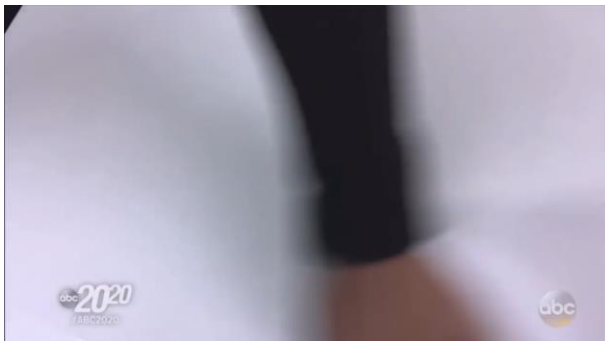

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Panic/Duress Buttons

Wearables, mobile apps, or hardware which enables employees to discretely send SOS alerts in emergency situations.

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Video Surveillance Systems

Includes the use of closed—circuit television (CCTV), public view monitors (PVMs), or body-worn cameras to surveil a building, area, worksite, etc.

57% Decrease in violent crime in parking lots(Welsh & Farrington, 2009)

23% Decrease in violent crime in public transit systems(Welsh & Farrington, 2009)

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Intelligent Case Management

Software solutions that help organizations track workplace incidents, analyze trends, and generate actionable reports.

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Technology is not the end all for workplace violence.

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Security robot bullied and forced off the street in San Francisco

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Adding Back the Human Element

- **Technology should facilitate, not replace, other administrative controls:**
  - Zero-tolerance violence policy
  - Clear and well-communicated reporting procedures
  - Employee training, especially in recognizing and deescalating conflict
  - Employee wellness benefits, EAPs
  - Enabling two-way communication for employees

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Making Innovation Accessible

WORKtoZERO an nsc program

Safety Innovation Journey

www.nsc.org/WorktoZero

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Additional Resources

- **Workplace Violence Report & Playbook**
  - Workplace Violence Overview
  - Elements of a Prevention Plan
  - Technology Solutions
  - Actionable Tools & Resources

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Thank you!
Questions?

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