



# A Look into Education and Government

2019 Risk Trends

# About this Publication

Liberty Mutual Insurance created this publication to provide agents and brokers with key insights into the costs of risk for public entities — particularly large, complex risks. Equipped with these insights, which are based on our team's wide-ranging expertise, you'll be better positioned to help lower risk management costs for education and government entities.

We'll cover the following:

- 01. Featured trend**  
An in-depth examination of a recent trend within the industry.
- 02. Emerging trends and issues**  
A survey of current and past trends, including major recent developments and a forecast of their potential impact.
- 03. Rate and loss cost trends**  
A state-level view of prospective rates and retained loss costs for workers compensation, and a severity outlook and basic limit loss cost summary for general liability.
- 04. Macro perspective**  
Key economic trends that we expect to have an impact on risk management.

Section Overview

- Violent Events in Schools
- Preparedness
- Technology
- Armed Staff

# Featured Trend

Each year, this section focuses on a topic that is currently impacting the industry. This year's selected topic is violent events in schools.

## A closer look at violent events in schools

Educational institutions have often been a target for both threats of violent events and actual violent events from students and outsiders alike, due to the vulnerable nature of the school environment. In the 2017-2018 school year, more than 3,659 threats and incidents of violence occurred in K-12 schools in the U.S. This is an increase of 62% from the 2016-2017 school year.

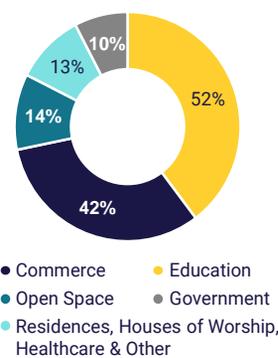
An alarming statistic is the fact that at least 279 of these threats involved violence, compared to 131 from the 2016-2017 school year. They range from unspecified threats, to bomb or shooting threats, to a combination of those. The most common form of threat is via social media; however, others are written or verbal.

The majority of threats are from students, and the highest volume occur at the high school level, followed by middle school, then elementary. The same holds true for actual acts of violence. The majority takes place at the high school level, followed by middle school, then elementary.

Two violent events that have sparked an immediate need for attention are the 2018 shootings at Stoneman Douglas High School in Parkland, Florida, and Santa Fe High School in Santa Fe, Texas. These events have escalated the need to reevaluate school safety. An evaluation of elements such as preparedness, security, and technology is instrumental in properly preparing a school for a violent event.

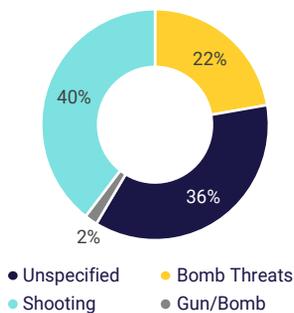
The Department of Education's Readiness and Emergency Management for Schools (REMS) provides the foundation for schools preparing for emergencies, through five mission areas defined below. This section will focus on the Prevention and Protection mission areas and how they relate to violent events.

Active Shooter Incidents in the US 2000-2017



Source: Department of Homeland Security, K-12 School Security

Types of Threats 2017-2018



Source: Educator's School Safety Network

## Readiness and Emergency Management for Schools (REMS)

Prevention	Protection	Mitigation	Response	Recovery
The action schools and school districts take to prevent a threatened or actual incident from occurring.	The ongoing actions schools and school districts take to eliminate or reduce the loss of life, injuries, and property damage from an emergency event.	Eliminating or reducing the loss of life, injuries, and property damage from an emergency event at school.	Putting the school's and school district's plan into place to respond effectively to an emergency event and provide for the immediate needs of students and staff.	Teaming with community partners to restore educational programming, the physical environment, business operations, and social, emotional, and behavioral health.

Source: Readiness and Emergency Management for Schools (REMS) Technical Assistance (TA) Center, Protection Fact Sheet

## Preparedness

Many strategies and techniques are available to help schools prepare for violent events. All schools have unique characteristics, including resources, building features, priorities, and local or regional influences. These differences should be considered when selecting a preparedness model.

The Department of Homeland Security (DHS) has school safety and security information online, offering resources and tools to support schools when preparing for violent events. This material includes information on how to implement a threat assessment model that helps identify potentially harmful behavior, as well as a process to mitigate these situations. DHS provides recommendations for creating a cross-functional team, identifying concerning behaviors, monitoring reported threats and tips, handling concerning behaviors, and determining when to include law enforcement. The threat assessment model includes the following eight steps:

### Department of Homeland Security Threat Assessment Model

Step 1: Establish a multidisciplinary threat assessment team

Step 2: Define concerning and prohibited behaviors

Step 3: Create a central reporting mechanism

Step 4: Determine the threshold for law enforcement

Step 5: Establish assessment procedures

Step 6: Develop risk management options

Step 7: Create and promote safe school climates

Step 8: Conduct training for all stakeholders

It is crucial not only to develop these plans, but to perform practice drills in case of an actual event. Local law enforcement and first responders should be included in these drills. For more details on forming a preparedness plan, please review information from DHS [here](#).

When developing violence prevention plans, schools should consult with legal representatives to ensure compliance with state and federal laws and regulations.

## Technology

Security in the education sector is instrumental in helping keep schools safe. According to 2017 IHS Markit research, the school security market has surged to approximately \$2.7 billion a year.

While security in schools is growing, so are mass shootings in secondary schools. In the last 5 years, these shootings have reached unprecedented numbers. The effectiveness of school preparation and security measures is still being assessed.

Schools can implement both high- and low-cost preparations, as well as high- and low-tech security measures. State and federal governments often offer grants to bolster school security, to help defray costs to school districts. Investment in training is also important; this training should be ongoing and frequent to ensure all parties are as prepared as possible.

Technology



39.2%

of threats made involve social media

Source: Educator's School Safety Network

Traditional low-cost measures include anonymous tip lines, metal detectors, and video surveillance systems. Metal detectors have been used in schools for many years and can be a relatively inexpensive way to detect attempts to bring a weapon into a school.

Video surveillance systems can range from fixed, moving, black-and-white, color, or high-definition systems. One issue with this method is that systems may not be adequately monitored and lack communication to local authorities. To solve for this, control centers can be tied into a surveillance system. Facial recognition paired with video surveillance are available too. The disadvantages with these systems is that they may be costly to deploy and may have room for error.

Another option is a door-blocking mechanism which prevents a door from being opened from the outside. This may deter a perpetrator from entering a classroom.

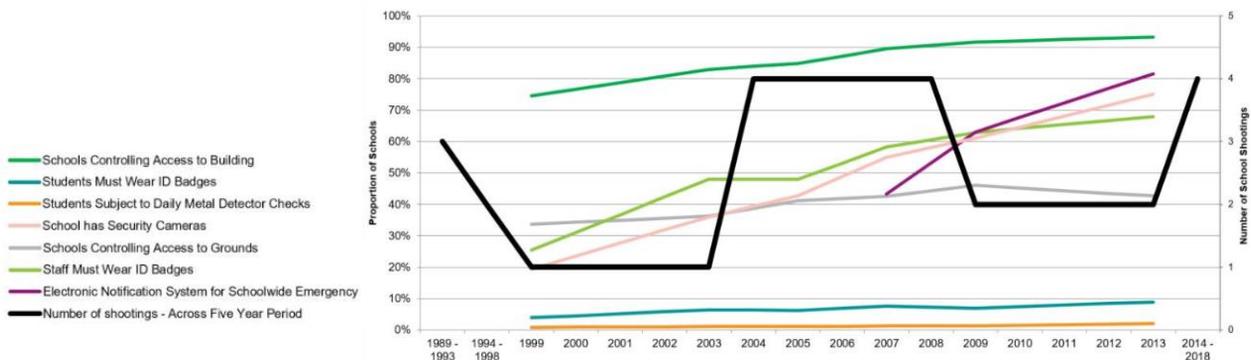
Visitor management systems are also a fairly inexpensive method, but should involve written policies and procedures around entrances, sign-in, badging, and managing the parking lots. The entrances should be regulated; a single entrance point is recommended.

Another approach schools are taking is to share digital floor plans with local authorities who would respond to a violent event. This helps authorities identify proper access and evacuation points. Acts of school violence tend to start and end within 10 minutes, so minimizing the time it takes local responders to reach the violent event can help mitigate damage and potentially save lives.

New products and technologies are being created to cater to schools and students for violent event protection. Bulletproof whiteboards that can act as a shield and bulletproof backpacks are now available.

Social media has played a big part in monitoring threats. Some schools are purchasing social media monitoring software in the hope that threats can be caught early, and are sometimes suspending students who post threatening language. It is anticipated this will become more common as social media continues to be an outlet for people to air grievances. Also in use are social apps that allow anonymous reports of threats or notification of police if a violent act happens. There are apps that a parent can purchase for a child as well as apps the school district can purchase that connect directly to local authorities and command centers to assist with communication in the event of an incident.

Public School Security Measures vs. Number of School Shootings



Source: IHS Markit

## Armed Staff

### Key Facts

In 2018, Florida's Coach Aaron Feis Guardian Program, named after an instructor killed in Parkland, was enacted as part of FL SB 7026. The program:

- Allows certain employees to carry a gun at school
- Allows school districts to decide whether or not to participate
- Does not allow participation by teachers with only classroom duties, but does allow teachers with other responsibilities such as coaching or other employees to participate.
- Requires guardians to complete firearm safety and proficiency training, as well as diversity training.

A growing number of states are allowing for armed staff in K-12 schools. As of June 2018, a majority of U.S. states have enacted legislation allowing firearms in school buildings, with state-by-state differences in legislation, including which individual or staff may carry a firearm. Schools may hire or outsource a school resource officer or law enforcement professional, or may arm their own staff members.

The preferred method is typically a school resource officer or law enforcement professional, but this is an expense that some schools simply cannot afford.

Arming of staff requires additional background checks and often includes mental health evaluations and extensive, ongoing training. A school must consider how many staff members it wants to arm, who approves those staff members, what types of permits are necessary, and the experience levels of armed staff. Other considerations include types of weapons and ammunition, maintenance and storage of weapons, and other factors.

### Which States Allow Firearms on K-12 School Grounds?

Policy	States
Anyone with permission from school authority	19 states: AK, AZ, CT, GA, IA, KS, LA, MA, MI, MT, NJ, NY, NV, OH, OK, OR, TX, UT, VT
Concealed carry license holders	CC permit alone: AL, OR, RI, UT CC permit and permission from school authority: ID, IN, MO
School employees (other than security)	CC permit and permission from school authority: ID, KS, WY Permission from school authority and completed required training: FL, MO, OK, TN (only in qualifying districts), TX, SD
School Security	21 states: AL, CA, CO, DE, GA, ID, IL, IN, MD, MI, MS, ND, NM, NV, OH, OK, SD, TN, TX, WA, WV

Source: Guns in Schools, National Conferences of State Legislatures, 8/13/2018

## Conclusion

Keeping students and staff safe at school is essential to the learning experience. There is not one preparedness plan, tool, or technology that can guarantee students and staff will never be harmed by a violent event at school, and it is important to recognize that all schools have unique characteristics and face different risks and dangers. However, the more prepared and aware school administrators and staff are of the potential for violent events, the more likely they will be able to minimize threats and dangerous situations. **When making any decisions regarding safety, schools should consult with legal representatives to ensure compliance with state and federal laws and regulations.**

Sources: Readiness and Emergency Management for Schools (REMS) Technical Assistance (TA) Center, Protection Fact Sheet, Department of Education, [rems.ed.gov/Docs/Protection\\_Fact\\_Sheet\\_508C.pdf](https://rems.ed.gov/Docs/Protection_Fact_Sheet_508C.pdf)  
 Violent Threats and Incidents in Schools: An analysis of the 2017-2018 School Year, Educator's School Safety Network, [eschoolsafety.org/violence/](https://eschoolsafety.org/violence/)  
 Enhancing School Safety Using a Threat Assessment Model, Department of Homeland Security, July 2018, [dhs.gov/sites/default/files/publications/18\\_0711\\_USSS\\_NTAC-Enhancing-School-Safety-Guide.pdf](https://dhs.gov/sites/default/files/publications/18_0711_USSS_NTAC-Enhancing-School-Safety-Guide.pdf)  
 K-12 School Security, A Guide for Preventing and Protecting Against Gun Violence, Department of Homeland Security, 2018 [dhs.gov/sites/default/files/publications/K12-School-Security-Guide-2nd-Edition-508.pdf](https://dhs.gov/sites/default/files/publications/K12-School-Security-Guide-2nd-Edition-508.pdf)  
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Public Entity Trends and Lifecycles

Telematics to Impact Driver Behavior

Cyber Breaches

Updates

- *Sports-Related Concussions*
- *Sexual Misconduct and Trafficking*
- *Law Enforcement and Body-Worn Cameras*

# Emerging Trends and Issues

This section presents the major trends and issues that affect risk management decisions by public entities. Each year, we discuss selected trends and issues in detail, detailing the scope of their impact as well as describing strategies public entities can use to respond.

This year's selected topics are telematics to impact driver behavior and cyber breaches. We also have included updates from prior-year topics to include law enforcement and body-worn cameras, sports-related concussions, and sexual misconduct and trafficking.

## Public Entity Trends and Lifecycles

### Telematics to Impact Driver Behavior

School buses and private passenger fleets both present significant risk for schools and public entities. Using telematics can help identify unsafe behaviors and provide coaching opportunities to drivers to ultimately reduce accidents and injuries.

### Cyber Breaches

School systems are an easy target for cyber attacks due to the increase in devices on school networks and potential for outdated systems that are used in districts. Identifying threats and training users are important techniques to minimizing cyber breaches.

### Law Enforcement and Body-Worn Cameras

The use of body-worn cameras by law enforcement provide many benefits to officers and the public. There are also arguments against the use of the technology. Recent studies do not provide conclusive findings on the use of this technology.

### Sports-Related Concussions

Traumatic brain injury (TBI) in youth sports continue to be a concern for schools. New studies have found that full-contact sports like football and ice hockey are not the only sports impacted by TBI, and female athletes are just as likely to suffer TBI as males.

### Sexual Misconduct and Trafficking in Education

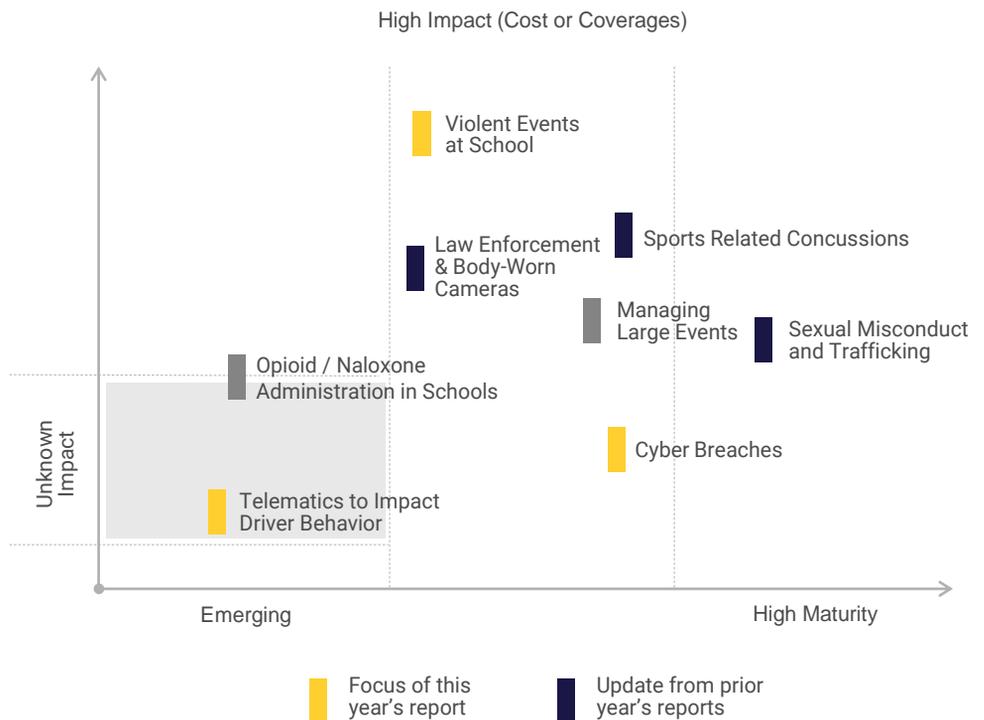
Sexual abuse of children by adults is a continuing problem. Advances in technology also create communication channels that are difficult to control or monitor. Sex trafficking is also a growing concern. Schools need to be aware of what to look for and how to respond.

### Opioid/Naloxone Administration in Schools

The increase in students using heroin and other opioids at school has opened discussions around opioid antagonists – like Naloxone – that are administered in the event of an overdose. If a school chooses to provide them, extensive review is needed regarding procedures, protocols, and approved staff. Legal counsel should be included in the development of any plan.

### Managing Large Events

Events like concerts, sports, political rallies, or conventions can leave audiences and participants vulnerable. Schools and public entities can be held responsible for security, or lack of security, provided at events in their facilities.



## Telematics to Impact Driver Behavior

### Impact

Schools and public entities face significant risks when they hire individuals to drive buses, cars, vans and other vehicles as part or all of their job duties. Liability can arise from injuries to passengers in the vehicle, individuals in another vehicle involved in an accident, or damage to another person's property, should an at-fault accident occur. Monitoring and correction of driver behavior is critical to ensure the safety of drivers, passengers, and others on the road.

### Impact Prevention and Mitigation Strategies

When telematics are used to identify aggressive driving behaviors, they should be used as part of an overall fleet safety strategy. Based on studies of high-performing fleet safety programs, the following elements are typically included in programs with lower crash and vehicle-related injury rates.

Telematics can be used to monitor performance, provide feedback, and change performance that does not meet expectations. Telematics should not be expected to make up for inadequate driver selection or a lack of communicated expectations for drivers. However, as one part of a comprehensive fleet safety strategy, telematics can help reduce the risk of crashes related to aggressive driving.

### Process for Using Telematics

Telematics can provide large amounts of data. Processing that raw data into actionable information has been shown to reduce aggressive event rates. This process starts with establishing event parameters that relate to risk. Of the four main event types (speeding, hard braking, rapid acceleration, and cornering), not all may apply; for example, drivers of large trucks may not be able to speed up quickly enough to trigger a rapid acceleration event.

### Comparing Drivers

Once event parameters have been established, event rates can be calculated. When comparing drivers, a telematics user should understand the highest, median, and lowest event rates among drivers, and should compare drivers to the median. In most fleets, 60 percent to 70 percent of drivers have performed better than the mean or average event rate. Showing a driver how that driver compares to the middle of the pack, rather than simply assigning a score, helps them understand how frequently they act aggressively when driving.

### Changing Driver Behavior

Telematics companies and other vendors may have training modules that cover safer driving techniques. In case studies, companies that showed drivers how they compare to others in similar circumstances, then communicated clearly what changes were needed, were able to reduce aggressive event rates more regularly than those that relied on "driver training."

Sources: MVDP Driver Telematics Root Cause Analysis, Risk Control from Liberty Mutual Insurance, RC 5392, 8/2015

## Elements of a High-Performing Fleet Program

1. Select drivers based on their history and ability to perform the job
2. Establish and communicate expectations on how jobs should be performed
3. Monitor performance and measure against expectations
4. Provide feedback on performance
5. Change behaviors that do not meet expectations with consequences
6. Document actions, policies, and expectations

## Cyber Breaches

### Impact

Cyber attacks across the educational industry are on the rise. According to an article by CD Networks, the top five industries that are most vulnerable to cyber attacks are small to medium-sized businesses, healthcare organizations, government agencies, the energy industry, and higher education. Just as schools take measures to secure themselves against physical acts of violence, they must also protect themselves against the threat of a cyber attack.

Cyber attackers have historically targeted higher education institutions, but K-12 schools have become an increasingly common target. Educational institutions are targeted because they are viewed as less secure than government networks. The map below shows cyber incidents reported in K-12 schools since 2016.



Cybersecurity Resource Center has created an interactive incident map that shows all of the districts in the U.S. that have been affected by a cyberattack since 2016.

Source: K-12 Cyber Incident Map since 1/2016, K-12 Cybersecurity Resource Center

### Impact Prevention and Mitigation Strategies

One of the main reasons schools are targeted is because school networks are not always separate from administrator networks. As a security measure, schools are encouraged to keep these networks separate.

Another reason schools are targeted is because many use outdated IT infrastructure, exacerbated by limited funding for cyber security upgrades. Schools are also vulnerable because they often support the use of computers, tablets, and cell phones not owned by the school, but by students. Schools should be encouraged to keep offline any device that doesn't absolutely require network connection.

Training of staff and administrators is crucial, as is network vulnerability testing. If a school can identify vulnerabilities, it may be able to mitigate risk related to cyber attacks.

A common form of cyber attack is via ransomware, in which a school receives a threat to release private confidential data unless a ransom is paid (typically with Bitcoin). The theft and sale of social security numbers is another risk. Students are particularly vulnerable, as they generally have clean credit histories, making their social security numbers highly valuable. These attacks can be catastrophic to both the students and the school.

Cyber attackers also will hack private information such as phone numbers, then demand ransom to prevent them from sending out mass threatening texts. It is important to note that there is no known occurrence of any of these text threats translating to actual violence. However, schools must still take all threats seriously, which is why a secure system that prevents this scenario is so important.

Schools also may be targeted by “phishing” campaigns that can disseminate a computer virus that takes down an entire school network. It is important to train students and staff to recognize these types of campaigns and other cyber-related threats, so they can better identify phishing attempts before the school’s network is breached.

It is imperative that schools are aware of the types of attacks, proactive in educating both staff and students, and prepared in case an attack or actual breach occurs. This is, of course, an ongoing process as new technology creates the potential for new threats.

Sources:

The Five Industries Most Vulnerable to Cyber-Attacks, CD Networks, 2/16/2018, [cdnetworks.com/en/news/the-5-industries-most-vulnerable-to-cyber-attacks/6805](https://cdnetworks.com/en/news/the-5-industries-most-vulnerable-to-cyber-attacks/6805)

K-12 Cybersecurity Resource Center, [k12cybersecure.com/](https://k12cybersecure.com/)

2018 NSBA Cyber Risk Report: School Board Communication at Risk, National School Board Association, 2018, [cdn-files.nsba.org/s3fs-public/NSBA\\_Cyber\\_Survey.PDF](https://files.nsba.org/s3fs-public/NSBA_Cyber_Survey.PDF)

## Sexual Misconduct and Trafficking (Update)

Sexual abuse of children by adults is an ongoing issue for educational entities, religious institutions, sports associations, and any youth-oriented organization. In order to better protect children from sexual abuse by adults, states are enacting legislation that requires schools to develop and provide curriculum that addresses and educates on the topic of sex trafficking, especially to homeless and at-risk students.

### Societal Changes

Over time, individuals and organizations have been held to a greater degree of accountability for sexual misconduct, including for offenses committed many years ago and brought to light more recently. Victims often receive extensive public support to seek justice and punish the individuals and organizations involved.

The digital world and the facility with which children can communicate with just about anyone, anywhere, has enabled adult perpetrators to more easily establish contact with children. Their ability to build relationships and “groom” potential victims is enabled by access to websites such as social media sites.

### Key Facts

Statistics from the U.S. Department of Justice:

- Approximately 1.8 million adolescents in the United States have been the victims of sexual assault
- 82% of all juvenile victims are female
- Teens 16 to 19 years of age are 3.5 times more likely than the general population to be victims of rape, attempted rape, or sexual assault
- Approximately 1 in 5 female high school students report being physically and/or sexually abused by a dating partner

### Addressing the Issue

There is no quick fix, unfortunately. Hard work and a commitment by all involved to effectively address and manage this exposure are important, including these five key items:

- **Effective School Policies.** All relevant school policies must be regularly reviewed, updated, communicated, trained on, and enforced. These would include but are not limited to:
  - School sexual harassment policy for both staff and students.
  - Employment practice policies, including background screenings for employees and volunteers, and discipline and termination protocols. These policies need to be consistently applied and enforced.
  - Codes of conduct for students and staff, especially centered on appropriate and inappropriate behaviors, and consequences of policy violations. This would include staff communications with students.
  - Acceptable Use Policies (AUPs) concerning technology and use of the internet and social media.
  - Anti-violence policies.
- Prompt reporting of actual or suspected abuse. An effective mechanism needs to be in place not only for the victim to report, but by those who suspect abuse may have occurred, is occurring, or is likely to occur.
- Timely and effectively investigating allegations of suspected sexual abuse.
- Ongoing training for and communication to staff and students.
- Removal of opportunities for abuse to occur. Examples include improving natural surveillance in a school and on a school campus (“You can’t supervise what you can’t see”), limiting one-to-one interactions in private settings, etc.

Since states are requiring or considering the topic of sex trafficking as curriculum instruction for schools, here are some leading national sources for reference materials on this topic:

1. NCHC: [Sex Trafficking of Minors: What Schools Need to Know to Recognize and Respond to the Trafficking of Students.](#)
2. Polaris Project: [Educators and Human Trafficking: In-Depth Review](#)
3. National Center on Safe Supportive Learning Environments: [Human Trafficking in America's Schools](#)

Sources:

Combating Sexual Misconduct in Schools, Liberty Mutual Viewpoints, Public Entities  
[viewpoint.libertymutualgroup.com/article/combating-sexual-misconduct-in-schools/](http://viewpoint.libertymutualgroup.com/article/combating-sexual-misconduct-in-schools/)  
 Protecting the Vulnerable: Helping Schools Stop Sexual Misconduct, Risk & Insurance, 4/2/2018  
[riskandinsurance.com/protect-vulnerable-helping-schools-stop-sexual-misconduct/](http://riskandinsurance.com/protect-vulnerable-helping-schools-stop-sexual-misconduct/)  
 Focus on Schools Newsletter, Liberty Mutual Insurance, April 2016  
 Focus on Schools Newsletter, Liberty Mutual Insurance, October 2017

## Law Enforcement and Body-Worn Cameras (Update)

Body-worn cameras present many advantages for law enforcement and communities. Accountability, increased evidence, and increased trust have been highlighted as benefits to adding these devices to police uniforms. Challenges such as privacy issues, malfunctions, limited evidence, data storage costs, and accessibility also are created by the use of body-worn cameras in law enforcement.

The use of body-worn cameras by law enforcement professionals continues to be analyzed for the benefits to the police officers and the community, impacts on police and individual behaviors, and the overall return on investment. A study released in 2017 on the Las Vegas Metropolitan Police Department found that officers wearing body-worn cameras generated fewer community complaints and use-of-force reports, and resulted in more arrests and citations than officers not wearing body cameras.

The study found savings were realized from the reduction in time required to investigate and resolve complaints against officers. Another study conducted in 2017 on the Washington, D.C., Metropolitan Police Department concluded there was not a statically significant difference in officer behavior between officers wearing body-worn cameras or not, with respect to arrests for disorderly conduct, use of force, or other complaints. Also, the study showed there was not a considerable difference in judicial outcomes for cases with officers wearing a body-worn camera versus not.

Currently, 34 states and the District of Columbia have created laws regarding body cameras, funding, open record laws, eavesdropping laws, and policy requirements. Recent studies have not provided conclusive evidence or support for or against the use of body cameras.

Sources:

The Benefits of Body-Worn Cameras, National Criminal Justice Reference Service 9/28/2017  
<https://www.ncjrs.gov/pdffiles1/nij/grants/251416.pdf>  
 Evaluating the Effects of Police Body-Worn Cameras, The Lab at DC, 10/20/2017 [bwc.thelab.dc.gov/about.html](http://bwc.thelab.dc.gov/about.html)  
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 Body-worn Camera Law Database, National Conferences of State Legislatures, 2/28/2018, [ncsl.org/research/civil-and-criminal-justice/body-worn-cameras-interactive-graphic.aspx](http://ncsl.org/research/civil-and-criminal-justice/body-worn-cameras-interactive-graphic.aspx)

## High School Sports-Related Concussions (Update)

In March 2017, the American Academy of Orthopedic Surgeons (AAOS) presented a study at its annual meeting concerning concussions in high school sports. The research sampled concussion injury data before enactment of state traumatic brain injury (TBI) legislation (2005-2009), as well as years when laws were in effect in all 50 states (2010-2015), in order to draw a comparison.

### Summary of Study Findings

- While the total participation rate for the nine sports reviewed increased 1.04 fold, the number of diagnosed concussions increased 2.2 fold from 2005 to 2015.
- In gender-matched sports, girls experienced significantly higher concussion rates than boys.
- During the years after TBI law enactment (2010-2015), the concussion rate was higher in girls' soccer than in boys' football, and during the 2014-2015 school year, concussions were more common in girls' soccer than any other sport.
- Boys' baseball and girls volleyball had the most significant increase in the rate of concussions during the 10-year study period.

It is theorized that the lack of protective gear, emphasis on in-game contact, and the practice of "headers" are contributing factors in the rise of concussions in girls' soccer.

This report concluded that the increase in number of concussions reported is attributed to increased awareness of concussions, injury mitigation and prevention, and the effect of statutory concussion training and reporting laws.

Link to the AAOS report on this issue can be accessed [here](#).

### CDC Treatment of Pediatric Mild Traumatic Brain Injury (mTBI) Updated

Recently, the CDC updated the guidelines for pediatric mTBI. Below are the five key practice-changing recommendations:

1. Do not routinely image patients to diagnose mTBI.
2. Use validated, age-appropriate symptom scales to diagnose mTBI.
3. Assess evidence-based risk factors for prolonged recovery.
4. Provide patients with instructions on return to activity customized to their symptoms.
5. Counsel patients to return gradually to non-sport activities after no more than two to three days of rest.

Coaches, parents, and school staff should be familiar with recommended practices to manage injury diagnosis and the recovery process.

### Recommended Actions

- Be knowledgeable of and adhere to state concussion statutes as well as state high school athletic association regulations. These are frequently updated as more is known about TBI. As an example here is a [link](#) to an FAQ page on Indiana Concussion Laws, last updated in June 2018.
- In those situations where an activity may fall outside the scope of state concussion regulations (such as intramural sports) responsible adults must take timely and appropriate action such as immediate removal from play, notification of injury to parents with recommendation to seek evaluation and management of injury from qualified medical providers and implement proper return to play protocols.
- Provide information sheets and ongoing communication to students and parents concerning concussion safety and awareness.
- Establish proper policy and procedure concerning head injuries. This would include removal from and return to play protocols.
- Ensure coaches and responsible adults are properly trained and certified concerning concussion awareness.
- Use safe equipment and safe facilities for injury prevention and mitigation.
- Offer timely and appropriate pre- and post-injury care management.
- Have a protocol in place to work with student athletes who have sustained a concussion.

#### Sources:

Female soccer players suffer the most concussions in high school sports, American Academy of Orthopaedic Surgeons, 3/14/2018, [aaos-annualmeeting-presskit.org/2017/research-news/concussions\\_hsu/](https://www.aaos.org/annualmeeting-presskit.org/2017/research-news/concussions_hsu/)

Take Action to Improve the Care of Children with mTBI, Center for Disease Control and Prevention, 9/4/2018 [cdc.gov/traumaticbraininjury/PediatricmTBIGuideline.html](https://www.cdc.gov/traumaticbraininjury/PediatricmTBIGuideline.html)

# Rate and Loss Cost Trends

## Section Overview

- About the WC Indices
- Loss Cost, Frequency and Severity Trends

This section shares workers compensation industry trends on retained (first \$100,000) loss costs through 2017.

Liberty Mutual has developed workers compensation industry metrics for government entity and educational institution segments based on the manual class codes most often found in each segment and the filed manual rates.

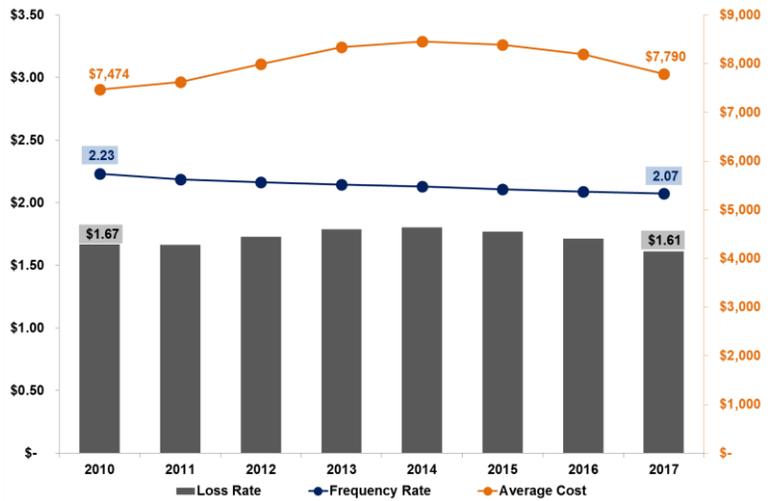
Industry metrics are derived using loss costs reported by carriers to individual state insurance bureaus using public entity class codes.

These metrics are advisory only. For a clearer view of the impact these trends will have on your clients, factor in each client's state and public entity segment.

The industry loss costs per unit of exposure and average cost per claim have remained stable since 2010. Frequency has seen a decrease of 7% over the same time period.

Source: Industry composite derived using loss costs reported by carriers to individual state insurance bureaus using government entities class codes. Valued as of 03/01/2018, data not adjusted for inflation. Loss limit: \$100,000, excludes \$0 claims.

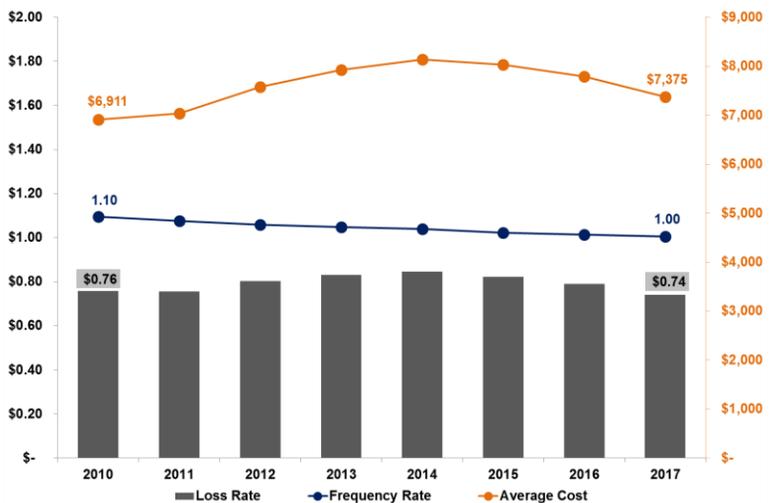
Government Entity Industry Loss Cost, Frequency and Severity Trends  
2010 – 2017 Customized Retained Loss Cost Indices



The industry loss costs per unit of exposure and average cost per claim have remained stable since 2010. Frequency has decreased 10% over the same time period.

Source: Industry composite derived using loss costs reported by carriers to individual state insurance bureaus using educational institutions class codes. Valued as of 03/01/2018, data not adjusted for inflation. Loss limit: \$100,000, excludes \$0 claims.

Educational Institutions Industry Loss Cost, Frequency & Severity Trends  
2010 – 2017 Customized Retained Loss Cost Indices



General Liability  
Loss Cost Indices

2015-2018 GL Loss Cost Index  
Government Entities

2018 State Loss Cost Rankings  
(Red: Highest, Green: Lowest)

SD	MD	OR
MS	NH	WA
HI	KY	TN
LA	VT	NV
NC	IN	NM
VA	AL	SC
ME	GA	AK
OH	WI	MO
IA	UT	MA
AR	DC	WV
NE	DE	RI
ND	CO	CA
MN	OK	CT
TX	WY	FL
ID	MT	NJ
KS	IL	PA
MI	AZ	NY

	2015-2016	2016-2017	2017-2018
Average Rate Change	-0.1%	0.0%	0.0%

ISO estimates government entities loss costs to remain flat through 2018.

Government entities are the higher loss cost segment, driven primarily by the residual loss costs associated with zoo operations, followed by airport and lake/reservoir operations.

South Dakota, Mississippi, Hawaii, and Louisiana are estimated to be the lowest loss cost states, while New York is estimated to have the highest loss costs for government entities.

2018 State Loss Cost Rankings  
(Red: Highest, Green: Lowest)

TX	MN	HI
KS	TN	IL
OH	OR	MT
IA	AL	SC
NC	GA	AZ
NE	IN	DE
VA	WA	NM
AR	VT	AK
DC	ID	LA
OK	MD	CA
ME	NH	NV
MI	MO	RI
UT	CO	CT
KY	MA	PA
ND	WV	FL
SD	MS	NJ
WI	WY	NY

Educational Institutions

	2015-2016	2016-2017	2017-2018
Average Rate Change	-0.7%	-0.4%	-0.4%

ISO estimates educational institutions loss costs to slightly decrease through 2018.

Educational institution loss costs are primarily driven by the residual loss costs associated with college/university and library operations.

Texas, Kansas, Ohio, and Iowa are estimated to be the lowest loss cost states, while New York is estimated to have the highest loss costs for educational institutions.

Source (Loss Costs): Formed from selected ISO CGL codes within the public entity classes and equally weighted. State loss costs are formed by weighting together territory loss costs by class using total territory loss cost information from ISO.

# Macro Perspective

Understanding the external environment is essential when formulating strategies for the upcoming year. This section summarizes macroeconomic trends that impact public entities.

## Education

### Industry Forecast K-12

As of January 2018, spending and investment by U.S. state and local governments on education are forecast to grow at an annual compounded rate of 4 percent between 2018 and 2022.

#### Technology in Schools

Technology in the classroom and at schools has seen a significant increase over the past few years. Computers and tablets are regularly used in the classrooms, and state and federal funding is being provided to install internet and improve technology in schools. As technology helps prepare students for the future, it also creates other challenges for schools such as theft, inappropriate usage, and security concerns. As schools integrate more technology into the learning process, they must establish security, network infrastructure, and policies and procedures for students and teachers.

#### Charter Schools Expansion

Charter schools continue to be a cost-effective alternative to public schools. More than 40 states have passed legislation allowing charter schools, and approximately 6,500 charter schools are open in the U.S. About 2.5 million students attended charter schools in 2013, which was a 40 percent increase from 2010.

#### Growth in Special Education Spending

Education for students with special needs is significantly more expensive than general classroom costs on a per-student basis. With 13 percent of the public K-12 population receiving special education instruction, these costs can be considerable for school districts as all U.S. schools are required to accommodate students with physical and mental disabilities.

#### Vocational Training on the Rise

Vocational training at high schools and technical schools has seen an increase due to the shortage of qualified workers in certain industries. With these programs, students are able to earn training and certificates that will help prepare them for specific industries such as IT.

#### Solar Installation at K-12 Schools Increasing

Solar energy options are becoming increasingly popular with K-12 schools to help reduce energy bills. Approximately 5,500 schools are using solar energy resources. Installation costs of solar equipment have decreased 67 percent over the past decade and most schools are able to finance installations through power purchase agreements, where the builder owns and maintains the system and the school buys electricity at a contracted rate for a certain number of years.

Source: First Research, [www.firstresearch.com](http://www.firstresearch.com), 2018

## Government

## Industry Forecast

As of January 2018, spending and gross investment by U.S. state and local governments are forecast to grow at an annual compounded rate of 4 percent between 2018 and 2022.

### Chief Data Officers

Several large cities have added chief data officer positions to enhance administrative operations through technology and improve technology resources for consumers. Cities are tracking and analyzing data to better city maintenance, traffic flow, records keeping, et cetera.

### Driverless Shuttle Pilot Programs

Several U.S. cities are partnering with vehicle manufacturers and technology companies to pilot driverless electric vehicles in public transit projects. Increased use of public transit helps reduce traffic congestion that costs cities billions of dollars each year due to lost productivity, wasted fuel, air pollution, and delays in commercial transport. Challenges for implementing these types of programs include high initial costs and liability risk.

### Population Pressures

As the U.S. population migrates to different areas of the country, like the Southwest, demands on local governments will increase. The need for expanded transportation, water sources, schools, and infrastructure will grow. Governments will need to plan funding for these expansions. Conversely, in areas where the population is decreasing, like the Northeast and Midwest, local governments may be challenged to support the basic needs of the community.

### Tax Exemption Attractions

Municipalities often try to attract new business or industries to their area by granting tax exemptions to employers. These short-term concessions can provide long-term benefits to the community through increased jobs and property taxes. However, challenges exist if there is an economic downturn resulting in employee layoffs or facility closings.

### Sustainability and Environmental Awareness

Cities are becoming more accepting of sustainability and environment-friendly philosophies, as the economic benefits can be advantageous. Often, "green" initiatives can pay for themselves through reduced energy and transportation costs. Also, attracting "green" jobs in environmental fields can be valuable to the future economy of a city.

Source: First Research, [www.firstresearch.com](http://www.firstresearch.com), 2018



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