



## White paper

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K12 violence: Intervention using a mobile duress system

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# Introduction

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*School shootings are only the most extreme example of K-12 school violence.*

When most people think of school violence, they think of school shootings. The media saturation that makes it unavoidable. However, school shootings are only the most extreme and rarest examples of school violence. The everyday violence in K-12 schools largely goes unaddressed, and can lead to catastrophic consequences without intervention.



**Figure 1** When most people think of violence in schools, they only think of school shootings.

This white paper will introduce you to the latest research about the everyday violence and bullying our children encounter in K-12 institutions. It will also discuss the reasons why K-12 violence is sometimes underreported, as well as the consequences, which include teacher attrition, school shootings and teen suicide. We will then close with a discussion of the need for intervention in potentially violent situations.

# Violence and Bullying in K-12 Schools

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*Nearly 16 percent of all high school students report having carried a weapon to school in the last month.*

Nobody likes to think about the connection between youth and violence. All of us would like to believe that our children are safe, particularly among their peers. This is not always the case, however. In 2017, the Centers for Disease Control and Prevention (CDC) found that 23.6 percent of children in 9th through 12th grade had been in a physical fight in the last year; 15.7 percent of students in the same age group had carried a weapon — a club, knife or a gun — on one or more days during the preceding month; 6 percent had been threatened with a gun on school property; and 7.4 percent were physically forced to have sexual intercourse.<sup>1</sup>

The problem of bullying is extensive and pervasive. As best-selling author of *The Bully, The Bullied, And The Not-So-Innocent Bystander* Barbara Colorosa reminds us:

In a study conducted by the Henry J. Kaiser Family Foundation, a U.S. health care philanthropy organization, in conjunction with the Nickelodeon TV network and Children Now, a youth advocacy group, almost three-quarters of preteens interviewed said bullying is a regular occurrence at school and that it becomes even more pervasive as kids start high school; 86% said that they get taunted and bullied at school — making bullying more prevalent than smoking, alcohol, drugs, or sex among the same age group.<sup>2</sup>

Unfortunately, teachers grossly underestimate the amount of bullying that takes place in their classrooms. The fact is that our children are being bullied with far greater frequency than any of us would like to admit. One study finds that more than half of teenagers worry about being assaulted at school; likewise, though nearly three-quarters of teachers believe they intervene every time they see a student being bullied, only a quarter of bullied students believe the same.<sup>3</sup>

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1. "Trends in the Prevalence of Behaviors that Contribute to Violence National YRBS: 1991—2017." Centers for Disease Control. ([https://www.cdc.gov/healthyyouth/data/yrbs/factsheets/2017\\_violence\\_trend\\_yrbs.htm](https://www.cdc.gov/healthyyouth/data/yrbs/factsheets/2017_violence_trend_yrbs.htm))

2. Barbara Colorosa. *The Bully, The Bullied, And The Not-So-Innocent Bystander, From Preschool To High School*. (New York: Harper Collins, 2015), 23

3. Ibid., 24



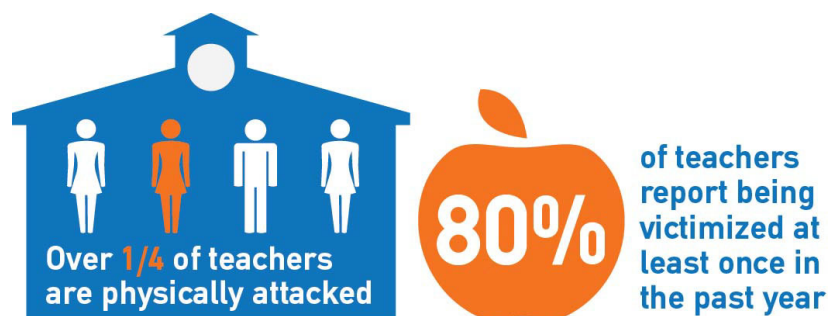
**Figure 2** The majority of all students worry about being assaulted at school.

## The Consequences of Violence and Bullying

### Teacher Attrition

*20 percent of teachers report being physically attacked, threatened or intimidated during unreported incidents.*

Up to 80 percent of all teachers report having been victimized at least once in the previous year.<sup>4</sup> While those victimizations include harrassment and property crimes, fully a fifth of all teachers describe being physically attacked, threatened with violence or intimidated during incidents they did not report.<sup>5</sup>



**Figure 3** Teachers are victimized every day at school.

4. "Understanding and Preventing Violence Directed Against Teachers: Recommendations for a National Research, Practice, and Policy Agenda." Dorothy Espelage, Eric M. Anderman, Veda Evanell Brown, Abraham Jones, Kathleen Lynne Lane, Susan D. McMahon, Linda A. Reddy, Cecil R. Reynolds. *American Psychologist*, Vol 68(2), Feb-Mar 2013, 75-87.

5. "Anderman, E.M., et al. (2018). Teachers' reactions to experiences of violence: an attributional analysis. *Social Psychology of Education*. (<https://doi.org/10.1007/s11218-018-9438-x>)

It's not surprising that victimized teachers face a whole host of physical and emotional issues, including anxiety and depression, as well as problems with their job performance and personal relationships. Unfortunately, teachers have repeatedly reported insufficient resources and training in dealing with school violence during several investigations.<sup>6</sup> It's no wonder they are feeling less and less safe in their own classrooms, and that their lack of safety is a major factor when they leave the profession.<sup>7</sup>

## School Shootings

When the worst happens, people naturally cast about for answers. In the case of school shootings, there is clear evidence that a root cause can be found in the everyday violence and bullying that students face. A 2021 study by the U.S. Secret Service found that nearly half of all school shooting plotters had been bullied at school.<sup>8</sup> In a 2015 article, Allison Paolino identifies bullying as one of two leading causes of school shootings, with 87% of school shooters having left evidence of being bullied.<sup>9</sup>

The causes behind school shootings are too complicated to stake on any single factor, of course. But it is clear that the everyday violence and bullying children face play a part in many school shooters' actions.

## Suicide and Self Injury

*12 young people  
take their own life  
every single day.*

There is nothing more tragic than when a young person makes the choice to take his or her own life. But more do than most of us would like to believe. In 2018, the last year for which there is data at the time of this writing, roughly 6,807 young people committed suicide, representing a 57.4% increase over the last period of relative stability from 2000-2007.<sup>10</sup>

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6. "Understanding and Preventing Violence Directed Against Teachers: Recommendations for a National Research, Practice, and Policy Agenda." Dorothy Espelage, Eric M. Anderman, Veda Evanell Brown, Abraham Jones, Kathleen Lynne Lane, Susan D. McMahon, Linda A. Reddy, Cecil R. Reynolds. *American Psychologist*, Vol 68(2), Feb-Mar 2013, 75-87.

7. Ibid.

8. "Averting Targeted School Violence: A U.S. Secret Service Analysis of Plots Against Schools." U.S. Department of Homeland Security and U.S. Secret Service. (<https://www.secretservice.gov/sites/default/files/reports/2021-03/USSS%20Averting%20Targeted%20School%20Violence.2021.03.pdf>)

9. Paolini, A. (2015). "School shootings and student mental health: Role of the school counselor in mitigating violence." *VISTAS Online*. (<https://www.counseling.org/docs/default-source/vistas/school-shootings-and-student-mental-health.p>



There are many lists of suicide risk factors, but they often miss one: being a victim of bullying and everyday violence. A 2012 study from the Archives of Pediatrics & Adolescent Medicine found that bullying more than doubled the risk of suicidal thoughts, and a second study that compiled media reports of 41 high-profile teen suicides found that 78 percent had experienced bullying at school.<sup>11</sup>



**Figure 4** One study found that 78 percent of teens who had committed suicide had done so after experiencing bullying at school.

*Nearly 150,000 young people are treated for self-inflicted injuries every year.*

It's also important to remember that suicide is only the most severe example of a wide spectrum of self destructive behavior. Young people can have as many as 100 to 200 suicide attempts for every actual suicide, and self harm is its own category for which it is nearly impossible to track statistics. One thing is known for sure, however: Every year, some 149,000 young people receive medical care for self-inflicted injuries.<sup>12</sup>

10. "State Suicide Rates Among Adolescents and Young Adults Aged 10–24: United States, 2000–2018." National Center for Health Statistics. (<https://www.cdc.gov/nchs/data/nvsr/nvsr69/nvsr-69-11-508.pdf>)

11. Amanda Gardner. "Bullying, abuse linked to suicidal thoughts in kids." *CNN*. (<http://www.cnn.com/2012/10/23/health/bullying-suicidal-thoughts/index.html>)

12. Gerald A. Juhnke, Paul F. Granello and Darcy Haag Granello. *Suicide, Self-Injury, and Violence in the Schools: Assessment, Prevention, and Intervention Strategies*. (Hoboken: John Wiley & Sons, Inc., 2010), 4

*In Suicide, Self-Injury, and Violence in the Schools: Assessment, Prevention, and Intervention Strategies*, Gerald A. Juhnke, Paul F. Granello and Darcy Haag Granello sum up the magnitude of the problem:

[T]he reality is that at any moment in any given school building in the United States, about 20% of students are seriously thinking about suicide or have made a suicide attempt. Whether any of us want the responsibility of managing this difficult population to fall on our already overburdened and underfunded schools or not, we do not have a choice. These students are in the building and they need our help.<sup>13</sup>

## Violence Intervention

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*Teachers are almost always the first responders to emergencies at school.*

When violence occurs at school, teachers are usually the first on the scene. In fact, teachers are often the only responders available. Fewer than half of all schools have a registered nurse on staff, and though a student-to-psychologist ratio of 500 to 1 is recommended by the National Association of School Psychologists, the average in 2020 was 1,211 to 1.<sup>14</sup>

With lawmakers understanding the urgent need for teachers to have the tools to deal with violence in schools, new legislation is being introduced around the country to improve school safety. After the Parkland school shooting that killed 17, Florida passed legislation that required duress in all schools. As reported by the Associated Press:

The measure, known as “Alyssa’s Law,” would establish an electronic link between schools and law enforcement — and reduce the confusion that became so apparent as a gunman roamed the grounds of Marjory Stoneman Douglas High School on Valentine’s Day 2018.<sup>15</sup>

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13.Ibid., 53

14.“Shortages in School Psychology: Challenges to Meeting the Growing Needs of U.S. Students and Schools.” (<https://www.nasponline.org/x43315.xml>)

15.Bobby Caina Calvan. “After Parkland tragedy, Florida Senate OK’s panic buttons.” *AP News*. (<https://apnews.com/article/24e93391693326f7123a5f-bc1e653ee8>)



New Jersey has since also passed a version of Alyssa's Law, and legislation is pending in several other states. The details vary, but all include duress systems. Because teachers are likely to be the first responders, they need a clear way to summon help.

## Duress Solutions

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*Unlike other security options, mobile duress systems are designed to protect individuals from personal harm.*

The emergency events that occur on K-12 campuses are as complicated as the student body itself. Violence can arise from a nearly infinite number of causes, and from almost any member of the community who happens to be in contact with the school. Inovonics designed its mobile duress system exactly for these types of complex and diverse environments.

Once an Inovonics duress system is installed, each teacher and staff member carries a wireless transmitter to be activated in case of an emergency, whether it be when they feel in imminent danger or become aware of a broader emergency event. With the press of a button, a call for help is sent immediately.

Once the alarm is sent, repeaters located throughout the building ensure that the alarm is carried to a receiver, which then disseminates the alarm to the appropriate personnel, whether internal or external, who can respond as needed.

### Complete Integration

The flexibility of the Inovonics network allows for mobile duress to be added to virtually any existing security system. Multiple partner integrations, along with add-on receivers, allow for an easy system upgrade while leveraging existing infrastructure with minimal incremental cost.

An Inovonics mobile duress system can be installed in hours, instead of the days or weeks. Likewise, once the system is in place, it is easy to move, add, or remove transmitters as needed. In schools this allows for the easy addition of classrooms and study areas.

The flexibility and integrability of Inovonics duress systems also allow for a variety of responses. For instance, when a wireless panic button is pressed it can be configured to immediately initiate the school's lockdown procedure. Having the ability to easily trigger an emergency response can save precious time when it matters most.

## **Mission Critical Reliability**

There is no requirement for a mobile duress alarm system more important than reliability. There are numerous types of wireless technology, and most are not capable of operating reliably in demanding campus environments. The wireless backbone of any mobile duress alarm system must be able to withstand interference, overcome obstacles, and guarantee multiple paths from the alarm device to the receiver. The importance of reliability is impossible to overstate.

Designed to move small amounts of data over a moderate range in commercial environments, the Inovonics commercial mesh network uses a frequency-hopping, spread-spectrum technology that sends redundant messages across multiple channels to avoid interference obstacles. The network is self-managed and dedicated, ensuring high priority alarm messages are delivered without interference. Due to its low latency and high reliability, the commercial mesh network is an ideal solution for security applications.

## **Precise Location**

In a crisis, the speed of response is directly tied to responders knowing the location emergency. In large schools with multiple floors, rooms, entrances, and even buildings, the school resource officer and other responders need to know exactly where the crisis is occurring to respond appropriately.

The Inovonics mobile duress system delivers precise location accuracy — room, zone or floor — depending on what your specific location requires, and uses application programming interface push notifications to integrate directly into the central station, access control system, or any other IP-based software application.

## Conclusion

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Nobody knows the extent of everyday violence better than K-12 teachers and staff. All too often teachers and staff are not just the first responders, but the only responders. Teachers and staff must have the training and tools necessary to keep themselves and their students safe.

An Inovonics duress system will provide the most critical component of your physical security system: The ability for teachers, to summon help when it is needed.

Inovonics duress systems are available from certified dealers. For more information, contact an Inovonics sales representative by email at [sales@inovonics.com](mailto:sales@inovonics.com) or by phone at 800.782.2709.