Overview and Research Summary of
The Comprehensive School Threat Assessment Guidelines (CSTAG)

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This overview summarizes 25 published studies of the Comprehensive School Threat Assessment Guidelines (CSTAG),[1] a school threat assessment model developed by Professor Dewey Cornell and colleagues at the University of Virginia in 2001 (Cornell & Sheras, 2006). For detailed information about using CSTAG, see the CSTAG manual (Cornell, 2024). The current CSTAG decision tree and forms are freely available for downloading from School Threat Assessment Consultations, LLC, on the training services website.

Background. In response to a series of school shootings in 1990s, U.S. government authorities in law enforcement and education recommended the use of behavioral threat assessment and management (BTAM) in schools (Fein et al., 2002; O'Toole, 2000). BTAM (often referred to as threat assessment) is a systematic approach to violence prevention intended to identify and mitigate serious threats, defined as behaviors or communications in which a person poses a threat of targeted violence (Vossekuil et al., 2002).

Both the FBI and the Secret Service conducted studies of selected school shootings and found that these students were often victims of bullying who had become angry and depressed, and were influenced by a variety of social, familial, and psychological factors (O'Toole, 2000; Vossekuil et al., 2002). Unfortunately, these studies concluded that, because these characteristics can be found in so many students, it is not possible to develop a profile or checklist that could be used to pinpoint the small number of truly violent students among them (Cornell, 2020). As a result, both the FBI and Secret Service cautioned schools against a profiling approach.

Nevertheless, the FBI and Secret Service did point out that almost all of the students who attacked their schools had communicated their intentions to attack directly or indirectly to others, typically their peers. Had these threats been reported to authorities and investigated, the shootings might have been prevented. Multiple studies have identified potential school shootings that were prevented because students reported a threat to authorities that was investigated and determined to be serious (Daniels et al., 2007; Langman & Straub, 2019; O'Toole, 2000; Pollak et al., 2008). Based on these observations, there is widespread support for schools to adopt a threat assessment approach (Erwin, 2019; National Association of School Psychologists, 2015; National Threat Assessment Center, 2018). The forthcoming ASIS international standards for school security will include a detailed section on school threat assessment (Cornell & Villines, 2024). Other indications of the emergence of BTAM as a standard school safety practice include:

- The National Center for School Safety has released a school threat assessment toolkit (Cornell & Maeng, 2024) to help schools establish threat assessment programs.
- Most states now encourage or require the use of BTAM in schools (National Association of State Boards of Education, n.d.).

[1] Previously known as the Virginia Student Threat Assessment Guidelines or VSTAG.

- A survey by the National Center for Education Statistics (2024) found that 85% of U.S. schools reported using threat assessment teams.

What is threat assessment? Threat assessment was developed by the U.S. Secret Service to deal with persons who threatened to attack public officials and has since evolved into a standard approach to analyze a variety of dangerous situations, such as threats of workplace violence (Fein & Vossekuil, 1998). A threat assessment is conducted when a person (or persons) threatens to commit a violent act or engages in behavior that appears to threaten what is termed "targeted violence." Targeted violence is a premeditated act toward a particular individual or group and can be distinguished from spontaneous violence that might arise during an argument. Threats might be explicit statements that express intent to harm someone but can also be inferred from concerning behavior that suggests the individual is planning or preparing to commit a violent act. Threat assessment is a process of evaluating the threat—and the circumstances surrounding the threat—to uncover any facts or evidence that indicate the threat is likely to be carried out. Student threat assessment can be distinguished from profiling in part because the investigation is triggered by some form of *threatening behavior* by the student rather than some combination of demographic and personal characteristics.

Although threat assessment had become widely used by law enforcement to protect public figures and prevent workplace violence (Meloy et al., 2014), it could not be applied to schools without modification and further development. Youth frequently make threatening statements that are not serious and engage in aggressive behavior (Irwin et al., 2023). Compared to adults, youth are more likely to engage in hitting, shoving, and fighting, but less likely to commit more serious acts of violence. It is important not to overreact to youthful misbehavior that does not pose a serious threat of violence. Threat assessment teams in schools face higher base rates for verbal and physical aggression than teams in workplace settings. In most cases, they want to teach students to be civil and respectful, and in many cases to resolve conflicts without fighting. Much less frequently, they must intervene to prevent more serious acts of violence.

Moreover, unlike other settings where threat assessment is used, schools have an obligation and commitment to educate all young people, regardless of their adjustment problems and difficulties. A workplace threat assessment team can aim to end the employment of a disgruntled employee or mollify an angry customer and let them go elsewhere. Schools want to resolve problems so that their students can continue in school. Consequently, the methods and goals of school threat assessment for students are not the same as those for other populations. In school settings, threat assessment is a problem-solving approach to violence prevention that involves assessment and intervention with students who have threatened violence in some way. *The primary goal of threat assessment is safety for everyone, but another important goal is to help students to be successful in school.*

CSTAG Model

In response to the 1999 FBI conference on school shootings, a group at the University of Virginia led by Dr. Dewey Cornell developed a threat assessment model for schools. This model integrated recommendations from FBI and Secret Service studies of school shootings (Fein et al., 2002; O'Toole, 2000) with practical advice and field-tested experiences obtained from educators working in Virginia public schools (Cornell & Sheras, 2006). Practitioner input has guided the process of developing, evaluating, and improving the CSTAG model for more then 20 years.

A guiding principle in developing CSTAG is the recognition that *BTAM must be adapted to the school setting because of the developmental differences of a student population and the school's mission to educate all students*. Statistically, schools will rarely if ever have a student who seriously intends to carry out a shooting, but every school has students who make threatening statements. *Consequently, school-based threat assessment must be a flexible and efficient process that can quickly resolve threats that are not serious and concentrate efforts on the small number of serious threats.* Notably, the CSTAG model provides teams with guidelines to distinguish whether a threat is transient (not serious) or substantive (poses a continuing risk to others). Accurately distinguishing between transient and substantive threats helps the school team to avoid overreacting to threats that are not serious and to focus attention on serious threats that merit protective action (Burnette et al., 2017; Kerere et al., 2025).

A transient threat is a broad category including all threats that do not reflect a genuine intent to harm others (Burnette et al., 2018; Cornell, 2024). Most student threats are transient threats that reflect expressions of humor, anger, frustration, or fear (Cornell et al., 2004; Nekvasil & Cornell, 2012). Transient threats include a variety of qualitatively different threats that are not serious. Some examples are a student shouting "I'm gonna kill you" as a joke or playfully using his or her fingers to shoot another classmate. Another student might say "I'm gonna kill you" as a competitive statement during a game. Still other transient threats are expressions of anger that do not reflect a serious intent to harm someone, such as a student stating rhetorically "I'd like to kill that jerk" in anger but not actually possessing an intent or plan to kill anyone (Cornell & Sheras, 2006). Transient threats can be provocative and disruptive, but from a threat assessment perspective, they do not reflect a real intent to harm others.

In contrast to transient threats, substantive threats are behaviors or statements that represent a serious risk of harm to others (Cornell, 2024). According to the CSTAG model, substantive threats are characterized by qualities that reflect serious intent, such as planning and preparation, recruitment of accomplices, and acquisition of a weapon. Examples of likely substantive threats include a student threatening "I'll get you next time" after a fight and refusing mediation for the dispute, or a student who threatens to stab a classmate and is found to have a knife in her backpack.

The distinction between transient and substantive threats is critical to determining appropriate responses and management strategies. The CSTAG model guides school teams in resolving and responding to student threats using a 5-step decision tree (see next page).[2]

[2] The initial version of the decision-tree had 7 steps, but the 5-step version describes the same process more parsimoniously.

THREAT ASSESSMENT AND RESPONSE PROTOCOL©

Comprehensive School Threat Assessment Guidelines

OVERVIEW

A threat typically is a communication of intent to harm someone that may be spoken, written, gestured, or expressed in some other form, such as via text messaging or other digital means. An expression of intent to harm someone is considered a threat regardless of whether it is communicated to the intended target(s) and regardless of whether the intended target is aware of the threat. Threats also may be implied by behavior that an observer would reasonably regard as threatening, planning, or preparing to commit a violent act. When in doubt, treat the communication or behavior as a threat and conduct a threat assessment. Threats that are not easily recognized as harmless (e.g., an obvious joke that worries no one) should be reported to the school administrator or other team members. The administrator or another team member makes a preliminary determination of the seriousness of the threat, in consultation with one or more team members. The student, targets of the threat, and other witnesses should be interviewed to obtain information using this protocol. A *transient* threat means there is no sustained intent to harm and a *substantive* threat means the intent is present (or not clear) and therefore requires protective action. This form is a guide for conducting a threat assessment, but each case may have unique features that require some modification.

A threat assessment is not a crisis response. If there is indication that violence is imminent (e.g., person has a firearm at school or is on the way to school to attack someone), a crisis response is appropriate. Take immediate action such as calling 911 and follow the school crisis response plan.

School Threat Assessment Decision Tree*

Step 1. Evaluate the threat.

Obtain a detailed account of the threat, usually by interviewing the person who made the threat, the intended victim, and other witnesses. Write the exact content of the threat and key observations by each party. Consider the circumstances in which the threat was made and the student's intentions. Is there communication of intent to harm someone or behavior suggesting intent to harm?

No → Not a threat. Might be an expression of anger that merits attention.

Yes ↓

Step 2. Attempt to resolve the threat as transient.

Is the threat an expression of humor, rhetoric, anger, or frustration that can be easily resolved so that there is no intent to harm? Does the person retract the threat or offer an explanation and/or apology that indicates no future intent to harm anyone?

Yes → Case resolved as transient; add services as needed.

No ↓

Step 3. Respond to a substantive threat.

For all substantive threats:

a. Take precautions to protect potential victims.
b. Warn intended victim and parents.
c. Look for ways to resolve conflict.
d. Discipline student, when appropriate.

Serious means a threat to hit, fight, or beat up whereas very serious means a threat to kill, rape, or cause severe injury with a weapon.

Serious → Case resolved as serious substantive threat; add services as needed.

Very Serious ↓

Step 4. Conduct a safety evaluation for a very serious substantive threat.

In addition to a-d above, the student may be briefly placed elsewhere or suspended pending completion of the following:

e. Screen student for mental health services and counseling; refer as needed.
f. Law enforcement investigation for evidence of planning and preparation, criminal activity.
g. Develop safety plan that reduces risk and addresses student needs. Plan should include review of Individual Educational Plan if already receiving special education services and further assessment if possible disability.

↓

Step 5. Implement and monitor the safety plan.

Document the plan.
Maintain contact with the student.
Monitor whether plan is working and revise as needed.

Decision Tree Process

At Step 1, the team evaluates the threat by interviewing witnesses, noting the exact content of the threat, and gathering information on the circumstances in which the threat was made. In most cases, the student of concern is interviewed and given an opportunity to explain what he or she meant by some threatening statement or behavior.

At Step 2, all available information is used by the school teams to consider the credibility and seriousness of the threat. A threat is considered transient if it can be determined that the student has no intent to carry out the threat. If the student is cooperative and provides a convincing explanation or apology, the threat is considered transient and the assessment is concluded here. Transient threats do not require protective action or security efforts. On the other hand, if the team is unable to resolve the threat or they are unsure about the threat's status, then the decision tree directs them to respond to the threat as a substantive threat.

At Step 3, teams respond to a substantive threat. All substantive threat responses require protective action, which varies depending on the circumstances of the threat and how the threat might be carried out. At a minimum, protective action typically involves notifying the intended victim and his or her parents, as well as contacting the parents of the student who made the threat. Protective action could also involve increased monitoring or supervision of the threatening student. Depending on the nature and credibility of the threat, substantive threats are further classified as either "serious substantive" or "very serious substantive" threats. Threats involving a simple assault or a fight are classified as "serious substantive" and resolved at this point. In contrast, a "very serious substantive" threat typically involves a threat to kill or a threat to use a lethal weapon or inflict severe injury on someone.

Step 4 is undertaken for very serious substantive threats. In addition to the protective actions taken at Step 3, the school team will conduct a safety evaluation leading to the development of a safety plan. The safety evaluation begins with a series of safety planning interviews. The primary interview is with the student of concern who made the threat. Typically, a member of the team with mental health expertise (sometimes with a colleague) will interview the student using a detailed outline of questions found in the CSTAG manual. These questions are intended to understand the conflict or problem underlying the threat in order to identify risk and protective factors to prevent violence. The interviewer will also determine whether the student should be referred for mental health treatment, counseling, or other support services. There are usually additional safety planning interviews with parents and others (such as teachers or therapists) who have relevant knowledge of the student.

In addition to the safety interviews, there is a law enforcement investigation of the case. This investigation will look for evidence of planning and preparation, to determine whether a crime has been committed, and assess what additional protective actions might be needed. The safety planning interviews and law enforcement investigation will be used to develop a safety plan. The student might be suspended from school for several days until this plan can be formulated. The safety plan determines the conditions under which the student can return to school or have a change in placement for safety purposes. If the student has special education status, the CSTAG team will collaborate with the special education team to make sure all student

rights are protected and changes to the student's educational program follow special education procedures.

At Step 5, the team implements and monitors the safety plan formulated at Step 4. The team maintains contact with the student and makes any necessary changes to the safety plan. In some cases, the student may need ongoing monitoring and long-term services.

Research Support

The Comprehensive School Threat Assessment Guidelines has been examined in a series of studies involving thousands of schools. This is a brief summary; interested readers are welcome to request copies of the complete studies.

Field test and training studies. The first two CSTAG studies were field-tests that demonstrated that school-based teams could carry out threat assessments in a practical, efficient manner without violent outcomes (Cornell et al., 2004; Strong & Cornell, 2008). Notably, across approximately 400 cases, nearly all of the students were permitted to return to school and few of the students received long-term suspensions or transfers to another school. Students receiving special education services made more threats than students in general education, but they did not receive disproportionately higher rates of school suspension (Kaplan & Cornell, 2005).

Another group of studies examined the effect of CSTAG training on staff attitudes and knowledge (Allen et al., 2008; Cornell et al., 2004, 2009, 2011, 2012; Stohlman et al., 2020; Strong & Cornell, 2008). After training, school personnel showed decreased fears of school violence and reduced support for a zero tolerance approach. They showed knowledge of threat assessment principles and the ability to classify cases reliably. These changes were observed across groups of school administrators, counselors, psychologists, social workers, and school resource officers.

Another study examined the ability of CSTAG teams to classify threats in a sample of 844 cases from 339 schools (Burnette et al., 2018). Inter-reliability for the transient-substantive distinction was 70% (Kappa = .53). Logistic regression analyses examined transient and substantive threat differences in threat characteristics and outcomes. Threats were more likely to be classified as substantive when they included warning behaviors (e.g., history of violence, weapon use, leakage, etc.), were made by older students, mentioned use of a bomb or a knife, and involved threats to harm self as well as others. Although only 2.5% of threats were attempted, substantive threats were 36 times more likely to be attempted than transient threats. Substantive threats were more likely to result in out-of-school suspension, change in school placement, and/or legal action. Overall, these results supported the transient-substantive distinction.

Controlled studies. Six controlled studies have compared schools using CSTAG to control group schools. The first controlled study was a retrospective comparison of 95 high schools reporting use of CSTAG, 131 schools reporting use of locally developed procedures, and 54 schools reporting no use of a threat assessment approach (Cornell et al., 2009). Students at schools using CSTAG reported less bullying at their school, greater willingness to seek help for

bullying and threats of violence (such as a student with a gun) than students in either of the other two groups. Students in CSTAG schools reported more positive perceptions of school staff than students in control schools. School records indicated that there were one-third fewer long-term suspensions in CSTAG schools, after controlling for school size, minority composition and socioeconomic status of the student body, neighborhood violent crime, and the extent of security measures in the schools (Cornell et al., 2009).

The second controlled study demonstrated that 23 high schools using CSTAG (then VSTAG) experienced a 50% reduction in long-term suspensions over a two-year period, whereas 26 control group schools showed no statistically significant change (Cornell et al., 2011). For bullying infractions, the control group had a slight increase, while CSTAG schools had a decline of 79%.

The third study was a randomized controlled study of 40 schools where half of the schools were randomly assigned to receive threat assessment training and 20 delayed training for one year and served as a control group (Cornell et al., 2012). During one school year, there were 201 students identified as making threats of violence (approximately half in each group). The critical issue was how school authorities would respond to these threats and the extent to which they would rely on school suspension or transfer as a response. Compared with control students, students in CSTAG schools were approximately four times more likely to receive counseling services and two-and-a-half times more likely to receive a parent conference. Notably, students in the CSTAG group were about one-third as likely to receive a long-term suspension and one-eighth as likely to be transferred to a different school.

Although the results of the randomized controlled study were strongly supportive of the CSTAG model, there was a wide range of implementation fidelity (Cornell et al., 2012). Schools that more closely complied with the CSTAG model achieved more positive results than schools that followed it less closely. This finding spurred the development of measures of implementation fidelity (being tested in current studies).

The fourth study examined suspension rates in secondary schools that had adopted CSTAG across the state of Virginia (JustChildren and Cornell, 2013). Among Virginia's 663 secondary schools (middle, high, or combined schools), the 398 schools that used CSTAG recorded 15% fewer short-term suspensions and 25% fewer long-term suspensions per year than the other 265 schools. This study was particularly concerned with the racial disparity between black and white students, since black students across all schools were twice as likely as white students to be suspended from school. A noteworthy finding was that short-term and long-term suspension rates were lower for both white and black students in schools using CSTAG, and the lower rate for black students substantially reduced the racial disparity in long-term suspensions.

The fifth study compared 166 middle schools using the CSTAG model to 47 middle schools using either an alternative model or 119 middle schools using no threat assessment approach (Nekvasil & Cornell, 2015). The number of years a school used the CSTAG model was associated with lower long-term suspension rates, lower levels of general victimization, higher student reports of fairer discipline, and higher teacher perceptions of school safety.

The sixth controlled study was concerned with the use of exclusionary discipline in response to a student threat of violence (Maeng et al., 2020). This study compared 260 schools using CSTAG with 267 schools using a generic Virginia model based on the state guidelines. This study found that students receiving a CSTAG threat assessment were less likely to be suspended, expelled, or arrested than students receiving threat assessments using the state guidelines. In order to conduct a fair comparison between groups, these analyses controlled for school characteristics of enrollment size, the percent of non-white students in the school, and the percent of students eligible for free or reduced price meals. At the student level, the study controlled for student grade level, gender, race, and special education status.

Implementation Studies

A recurrent question in educational research is whether programs implementing a program in routine practice and on a large scale will produce results comparable to those found in controlled studies. The state of Florida enacted legislation requiring the use of threat assessment in all public schools following the 2018 shooting at Marjory Stoneman Douglas High School. The Florida Department of Education (FLDOE) selected the Comprehensive School Threat Assessment Guidelines (CSTAG; Cornell, 2024) because it had the most supporting research (Jackson & Viljoen, 2023) and an established training program for school staff (Stohlman & Cornell, 2019). With funding from the U.S. Department of Justice, our research team was able to study the training and implementation process and to obtain archival data on school threat assessment outcomes, summarized in a comprehensive technical report (Maeng et al., 2024).

FLDOE began providing workshops and training on CSTAG in 2019 and continued during the COVID-19 epidemic. FLDOE invited all 67 public school districts to submit data case data for the 2020-21 school year. Approximately 21 districts submitted data, with many citing the time and effort involved as reason for non-participation (Maeng et al., 2024). FLDOE again invited all districts to submit data for the 2021-2022 academic year and this time 60 districts provided threat assessment case records. However, FLDOE did not mandate uniform recording keeping, so data completeness on student outcomes (such as the frequency of attacks and injuries following a threat assessment, disciplinary actions, support services, and year-end academic standing) varied across districts.

Safety. Studies in Virgina found that few threats were attempted and no shootings or fatalities occurred in any of the schools using CSTAG or the state as a whole (Cornell & Maeng, 2020). There were thousands of documented student threats to shoot, stab, or in some other way seriously injure or kill someone that were not carried out. However, because school shootings are statistically rare, a scientifically rigorous study to test whether CSTAG causally prevents shootings is not realistic (Cornell, 2020). Such a study would require thousands of schools assigned to groups using versus not using CSTAG, and the researchers would need years of data collection in order to accumulate enough cases where a shooting took place to measure whether the rate was lower in schools using CSTAG. Nevertheless, data on safety outcomes were examined in two studies of Florida schools.

The first study of safety outcomes in Florida schools examined how often students attempted to attack someone after a threat assessment in a sample of 621 cases from 21 school districts (Kerere et al., 2024). There were 107 attempts to carry out an attack (primarily a physical assault or fight) representing 17% of the sample. Only 3 cases (0.5%) resulted in a serious injury (such as a broken bone or requiring hospitalization). There were no shootings or fatalities. Notably, threats classified as substantive (36-40%) were about three times more likely to result in an attempt than threats classified as transient (13%). This study found that more than half of the attempts occurred in two districts, raising questions about the effectiveness of CSTAG implementation and related violence prevention efforts in those districts. The attack rate was 11% in the other 19 districts when these 2 districts were not considered.

The second study of Florida safety outcomes examined a much larger sample of 14,126 cases from 1,692 schools (Kerere et al., 2025). There were 1,533 (10.9%) cases resulting in an attack and 38 (0.4%) involving a serious injury. Approximately one-third of substantive threats and less than one-tenth of transient threats involved an attack. Community violent crime arrest rates were not associated with the likelihood of an individual student attack but were weakly associated with district-level attack rates. Data on injuries were available for a subgroup of 9,867 cases. Most (97.5%) of these cases did not include any injuries, but teams reported 206 (2.1%) minor and 38 (0.4%) major injuries. None of the injuries were caused by a firearm and none resulted in a fatality.

Threat Assessment Referral Rates. The overall results of the Florida study showed that threat assessments were conducted at all grade levels K-12 with a distribution of transient and substantive threats that was strikingly similar to previous studies conducted in Virginia (Maeng et al., 2024). A study of referral rates (Cornell et al., 2025a) examined 15,301 cases in 611 elementary, 341 middle, and 269 high schools (alternative schools and schools with nontraditional grade configurations were not included in these analyses). In one school year, schools conducted threat assessment on 1.5% of their enrollment, with the highest rate (1.8%) in middle schools, followed by elementary schools (1.6%) and high schools (0.9%). In practical terms, the average Florida elementary school of 628 students would conduct approximately 10 threat assessments per year. The average middle school of 883 students would have approximately 16 cases, and the average high school of 1,590 students would have approximately 14 cases. These results can help school authorities recognize the prevalence of student threats and the workload and resources associated with conducting threat assessments.

One notable finding of this study (Cornell et al., 2025a) was that, consistent with the Virginia studies, a relatively high proportion of cases (41%) involved students with disabilities (receiving services through an IEP or 504 Plan). It is understandable that students with disabilities that involve impulsivity, social-emotional disturbance, or high levels of frustration in learning might be prone to make threatening statements or engage in behavior that generated a referral for a threat assessment. However, a referral for a threat assessment could be a positive alternative to a referral for disciplinary action; additional studies (see Maeng et al., 2025 below) found that these students were not subject to disproportionate discipline (as is typically the case in non-threat assessment cases) and were more likely to receive support services identified by the threat assessment process.

Fairness and Equity in Student Outcomes. A central question throughout our research has been whether threat assessment resulted in student outcomes that were fair and equitable across groups defined by race, ethnicity, and disability status. The controlled studies conducted in Virginia found that use of CSTAG produced marked reductions in the use of exclusionary discipline, and furthermore, that little or no disparities between Black and White students, which are commonly observed in cases not involving threat assessment (Cornell et al., 2011, 2012; Cornell & Lovegrove, 2015 Cornell et al., 2018; JustChildren & Cornell, 2013; Maeng et al., 2020). Despite this evidence, some civil rights organizations continued to assert that the threat assessment process would result in disparate actions against students of color and students with disabilities (The Center for Civil Rights Remedies, 2022). Four Florida studies (summarized below) provided strong evidence from large samples of schools that students receiving a threat assessment with CSTAG were not subject to disparate treatment based on race or ethnicity, nor on family income or disability status. A study of schools using a Colorado model also found an absence of disparities (Crepeau-Hobson & Leech, 2022).

The first study of equity in Florida schools used data from 1,102 cases in 21 districts (Maeng et al., 2023). A unique feature of this study was the use of Bayesian logistic regression to demonstrate more specifically that students from different groups (Black, Hispanic, and White students, and students receiving or not receiving special education services) received comparable disciplinary and law enforcement outcomes. Unlike traditional significance testing with a null hypothesis that examines whether there was a statistically significant *difference* between groups, Bayesian analyses allow researchers to test a more specific hypothesis that the different groups received the *same* treatment. These analyses allowed us to state affirmatively that Black, Hispanic, and Other students were not more likely to be suspended or expelled from school, or be subject to law enforcement actions, compared to White students. Similarly, students with disabilities received the same disciplinary and legal outcomes as students without a disability. The only statistically significant difference was that White students were more likely to have a change in school placement than Hispanic students. One weakness of this study is that the 21 districts might not be representative of the state was a whole and might be the districts with the most desirable results.

The following year FLDOE obtained data from 60 of Florida's 67 districts, representing 90% of the state's public school enrollment. This second study (Cornell et al., 2025b) examined out-of-school suspension (OSS), placement change, and expulsion rates for approximately 19,000 students who received a threat assessment in 1,700 Florida schools. Bayesian multilevel logistic regression indicated that disciplinary outcomes were strongly associated with team determination of threat seriousness, but not school-level characteristics other than greater exclusionary discipline in secondary schools. Student-level disability and low income were associated with lower (not higher) rates of exclusionary discipline. Black and Hispanic students had slightly higher suspension rates, but expulsion and placement change rates were not different than White students. Compared to the disparities observed in non-threat assessment cases in the same schools, threat assessment was associated with small or no disparities. These results indicated equity in threat assessment outcomes for groups typically disadvantaged by disproportionate exclusionary discipline.

The third study examined law enforcement outcomes of arrest, court charges, and incarceration for 18,411 students in 1,646 schools (Cornell et al., 2025c). The sample was smaller because some schools did not record law enforcement actions. Only about 1% of students received a law enforcement action, contrary to claims by some civil rights groups that threat assessment would lead to criminalization of students for minor misbehavior (The Center for Civil Rights Remedies, 2022). A series of Bayesian multilevel logistic regression models found that law enforcement actions were associated most strongly with student grade and seriousness of their threat (i.e., older students and students who made more serious threats were more likely to be arrested). The analyses showed that students were treated similarly across groups defined by race/ethnicity, family income, and disability status.

A fourth study examined services provided to 23,134 students following a threat assessment (Maeng et al., 2025a). Approximately three-quarters of students received at least one service, most commonly parent consultation (45%), mental health services (33%), restorative practices (24%), and increased monitoring (20%). Many students (41%) received two or more services. Students making serious threats were more likely to receive increased monitoring and referrals for mental health services, while those making transient threats were more likely to participate in restorative practices. There was little or no association between race/ethnicity and services. Students with disabilities were already receiving services through their special education plans but received additional services such as increased monitoring and mental health services.

Academic Outcomes. Few studies have examined the academic status of students following a threat assessment. Stohlman and colleagues (2022) examined graduation rates for 146 students from 42 high schools in two large Virginia school districts who had received a threat assessment. The districts had been using CSTAG for over four years and thus had graduation records for a sufficiently large group of students who received a threat assessment. The overall graduation rate for the 146 students was 83%, which was lower than the overall graduation rate of 94% for the general school population, but comparable to the rate of 76% for a comparison group of at-risk students who received an out-of-school suspension for misbehavior that did not involve a threat assessment. Students who made transient threats had a 93% graduation rate, so the greatest risk of dropout was for students who made substantive threats. Interestingly, students with a disability who received a threat assessment were not at increased risk of dropout; in one of the districts, 35 of 36 students with a disability graduated.

A second study examined academic outcomes in a sample of 2,287 students from 322 Florida high schools (Maeng et al., 2025b). This study was confined to the academic status of these students at the end of the school year following their threat assessment and focused on adverse academic outcomes of failing a state achievement test (31%), failing a course (39%), being retained in a grade (10%), or dropping out (0.8%). Test failure rates were lower for students who received a threat assessment compared to the general student enrollment in the same schools. Dropout rates were comparable for both groups. Bayesian multilevel logistic regression analyses found that students who made substantive threats and Black students were most consistently at increased risk for adverse academic outcomes. The elevated risk for Black students was comparable or smaller than the elevated risk for the general population of Black students. These results suggest that many students receiving a threat assessment have academic

support needs, but adverse academic outcomes were not elevated compared to the general student population.

Distinguishing Features

Many schools have developed their own threat assessment model, typically based on general principles derived from the Secret Service and Department of Education reports (Fein et al., 2002; NTAC, 2018). There are many publications describing student threat assessment that also outline general principles of threat assessment or complete models (e.g., Cameron, 2018; McCann, 2002; Mohandie, 2014; Van Dreal, 2011). There are also several descriptive studies of the German NETWASS program, which was based in part on the CSTAG model (Leuschner et al., 2017). According to an independent review of school threat assessment models, CSTAG has been the most extensively studied model and is the only model supported by controlled studies (Jackson & Viljoen, 2024).

More than a decade ago, the CSTAG model (then called VSTAG) was reviewed by the National Registry of Evidence-based Programs and Practices (NREPP). In 2013, this model became the only threat assessment program recognized as an evidence-based practice in the National Registry of Evidence-based Programs and Practices.[3] In brief, the general definition of an evidence-based program is one that has been supported by controlled studies carried out with adequate measures and analyses.

There are at least five features of CSTAG that distinguish it from other identified models of threat assessment:

1) CSTAG has a detailed, 185-page manual with explicit instructions and a decision-tree.
2) CSTAG introduces the concepts of transient and substantive threats as a critical distinction in conducting a threat assessment.
3) Training for multidisciplinary teams is standardized in an interactive workshop that has been evaluated in several studies.
4) CSTAG emphasizes a flexible, non-punitive approach that discourages the use of school suspension in most cases and gives educators an alternative to zero tolerance practices.
5) A comprehensive safety assessment (described in the manual) is reserved for the most serious cases.

An independent study by Penn State University researchers compared the content of the CSTAG model to 11 other threat assessment models, including models by the Colorado School Safety Resource Center, the National Threat Assessment Center, and the Virginia Department of Criminal Justice Services (Hall et al., 2020). The authors identified 86 components of the CSTAG model (e.g., defining threats, specifying team member roles, procedures for conducting threat assessment) and found that no model contained more than 57% of the components found in CSTAG. The study concluded, “Based on the findings from the current study, it appears as

[3] NREPP was a program of the Substance Abuse and Mental Health Services Administration (SAMHSA) in the Department of Health and Human Services. The Executive branch of the federal government closed the NREPP website in 2018, despite protests from the scientific community and members of Congress.

though online threat assessment resources, while helpful, are not quite as comprehensive as Cornell's CSTAG. Containing an average of just over one-third of the CSTAG components, the evaluated resources were subsequently missing an average of nearly two-thirds of essential information." And "… the CSTAG is a relatively inexpensive and evidence based tool that comprehensively addresses all aspects of threat assessment."

One distinguishing feature of CSTAG training is that teams learn to use the model and are ready to begin conducting threat assessments by the end of the workshop. Seven studies have evaluated the one-day workshop used to train school teams to use the CSTAG model (Allen et al., 2008; Cornell et al., 2004, 2009, 2011, 2012; Strong & Cornell, 2008; Stohlman et al., 2020). In each study, school personnel showed decreased fears of school violence and reduced support for a zero tolerance approach after completing the workshop. They showed large increases in knowledge of threat assessment principles and the ability to classify cases reliably. Since a goal of training is to create a multidisciplinary team with a common knowledge base and perspective, it is noteworthy that changes were observed across school administrators, counselors, psychologists, social workers, and school resource officers.

The most extensive study of CSTAG training to date evaluated changes in knowledge of threat assessment in a sample of 4,666 school personnel (Stohlman et al., 2020). Across 100 workshops conducted by 9 trainers, all occupation groups showed large and statistically significant increases in their knowledge of threat assessment from pretest to posttest. On average, participants achieved threat classification accuracy scores of 75% after completing the workshop. Over 95% of participants provided positive evaluations of the workshop, including that the training improved their understanding of student threat assessment, had the right amount of practical information, and will be helpful in responding to student threats. After the workshop, 98% of participants agreed that they understood the basic concepts and guidelines for conducting a threat assessment and were motivated to use threat assessment principles in their schools.

Threat assessment should be considered one component of a comprehensive approach to maintaining a safe school (Osher et al., 2004). Threat assessment identifies students who may be in need of additional services, as well as more general problems in the school environment—such as bullying—that merit focused attention. Wilson and colleagues (2003) reviewed 221 studies of school-based interventions for aggressive or disruptive behavior by students and found that well-implemented programs can be highly effective.

The foundation of school safety rests on the creation of a caring community where students feel safe and secure (Catalano et al., 2004; Cornell, 2006; Mayer, 1995; Sprague et al., 2002; Sugai et al., 2000). Safety and security derive from two conditions: (1) an orderly, predictable environment where school staff provide consistent, reliable supervision and discipline; and (2) a school climate where students feel connected to the school and supported by their teachers and other school staff. These conditions describe an authoritative school climate which is associated with school safety, positive peer relations, student engagement in school, and higher academic achievement (Cornell, 2019; Cornell et al., 2016; Gregory & Cornell, 2009). Students in schools with an authoritative school climate are more willing to report threats of violence and seek help for problems such as bullying and harassment (Crowley et al., 2019; Payne et al., 2024). The good news is that there *are* effective programs and approaches to

maintain a safe and supportive school climate (Cornell, 2006; Cornell et al., 2021). School threat assessment can help school authorities to use them more efficiently by identifying student conflicts and problems before they lead to violence.

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