Threat Assessment By The Numbers: Using Data To Enhance School Practice

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Special thanks to
Dr. Amy Plog
from the
Colorado Department of Education
for her contribution and expertise.
The data charts in this presentation were modified for the sole purpose of demonstrating data analysis. Any identifiable data related to specific schools or districts has been removed.

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"Data is like garbage. You'd better know what you are going to do with it before you collect it."

Mark Twain

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Learning Objectives

Attendees will learn about...

- Why Threat Assessment data matters
- How Threat Assessment process is a form of data collection and analysis
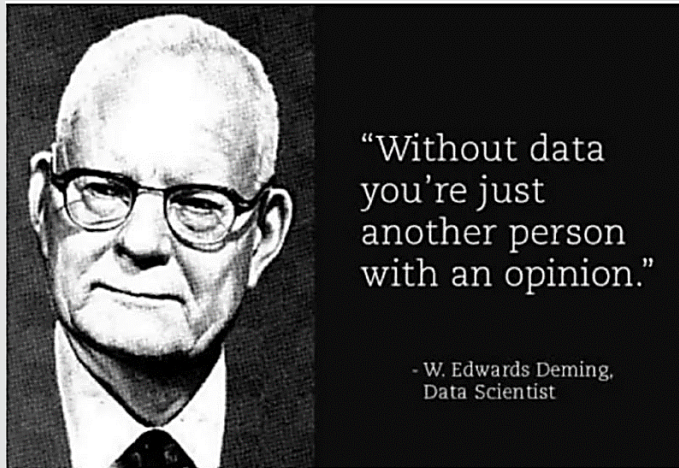- What schools can do to use data to effectively tell their story

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Why Data Matters

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"Without data you're just another person with an opinion."

- W. Edwards Deming, Data Scientist

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School TA **Without** Data Can Lead to…

- Uneven practice
- Reactionary planning
- Unclear patterns
- Uneven resources
- Disproportionality
- Inadequate staffing
- Unpredictability

TA **With** Data Enables Schools to…

- Standard practice
- Proactive planning
- Identify patterns
- Proportioned resources
- Monitor/address disproportionality
- Assess staffing needs

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TA Data Points

- **Expressions**
  o Correspondence, mail, letters notes
  o Journals, writings
  o Online presence, activity, blogging
- **Life and Relationships**
  o Nature and quality of family and social relations
  o Interactions with others, both positive and negative
  o Living situation, cohabitants, nature of residence
  o Habits, routines, options and views of person of concern
  o Memberships, religious views, hobbies
  o Movies, television, video, books, magazines
  o Financial situation, purchases patterns
- **Other**
  o Personal electronic devices
  o Weapons access, attempts to access, prac
  o Conceal carry permits, ownership registra
  o Club membership

- **Law enforcement**
  o Criminal history, NCIC searches
  o Emergency/Non-Emergency calls
- **Education**
  o School records, attendance
  o Academic performance
  o Discipline
  o School work
- **Medical and mental health**
  o Medical and mental health records
  o Notes by care providers
  o Interactions with social services
  o Substance use
  o Medications
  o Treatment notes

Making Prevention a Reality - FBI

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School Behavioral Threat Assessment Standards of Practice

AREA	NASP	FBI BAU	Secret Service NTAC
Multidisciplinary Teams (School or District Level)	X	X	X
Threat Assessment Team Training	X	X	X
Equity Lens/Preventing Disproportionality	X	X	X
Awareness Training for Staff, Students, Parents	X	X	X
Data Collection Systems	X	X	*
Ad Hoc Behavioral Health	X	X	X
Ad Hoc Law Enforcement	X	X	X

*Public Law 106-554, Section 515, otherwise known as the Data Quality Act (or Information Quality) **requires Federal agencies to issue guidelines ensuring and maximizing the quality, utility, objectivity, and integrity of information disseminated by the Federal government.** https://www.dhs.gov/information-quality-standards

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YOU CAN'T IMPROVE WHAT YOU DON'T MEASURE.

Michael Hyatt | http://www.michaelhyatt.com

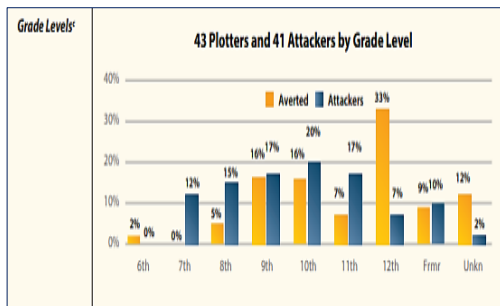Colorado School Safety Resource Center

Threat Assessment is All About Data Collection and Analysis

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What We Know and Practice Is Based on TA Data

43 Plotters and 41 Attackers by Grade Level

OVERVIEW	AVERTED ATTACKS *Averting Targeted School Violence*	COMPLETED ATTACKS *Protecting America's Schools (PAS)*
Intended Suicide[a]	• 37% intended to commit suicide or accepted they would die in the attack	• 22% committed suicide or killed by law enforcement
Schools[a]	• 84% high schools • 67% SRO (part-time or full-time)	• 73% high schools • 66% SRO (part-time or full-time)
Perpetrators[b]	• 95% were current students • 5% female • 43 lone plotters, 24 groups • Age: 11-19, 16 avg	• 90% were current students • 17% female • All lone attackers • Age: 12-18, 15 avg
Communications About Intent[d]	• 84% communicated with others	• 77% communicated with others
Interest in Violence[d]	• 67% interest in violent themes • 21% interest in white supremacy, Nazism, or related topics	• 49% interest in violent themes • 20% interest in white supremacy, Nazism, or related topics
Stressors[d]	• 91% experienced stressors within 5 yrs • Top categories: #1 family, #2 social	• 100% experienced stressors within 5 yrs • Top categories: #1 social, #2 family

https://www.secretservice.gov/sites/default/files/reports/2021-03/USSS%20Averting%20Targeted%20School%20Violence.2021.03.pdf

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"The **small sample size** limits the conclusions that can be drawn based on statistical analysis of events and thus in some sections, statistics were not reported. Though **case study research** is not designed for establishing generalizable truths or making predictions, it does allow the reader to **learn from the attacks** that have been prevented."

- Averting Targeted School Violence: A U.S. Secret Service Analysis of Plots Against Schools (2021)

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SAMPLE TALLY SHEET

Name / last, first	School	DOB/m-d-y	ID# (no dash)	Grade (0=K)	Age #	Gender M or F

Name	School	DOB	ID#	Grade	Age	Gender

- Filled out by each school
- End of each semester
- District tallied/analyzed data

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The ultimate purpose of collecting the data is to provide a basis for action or a recommendation.
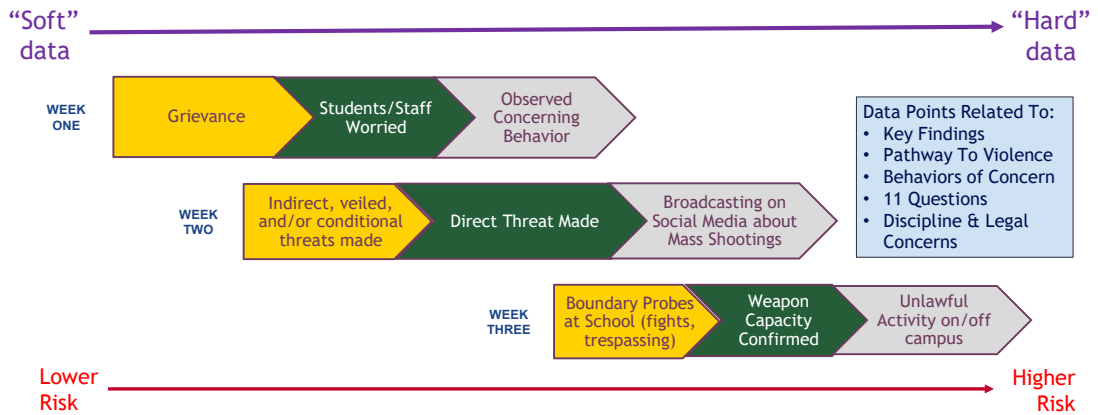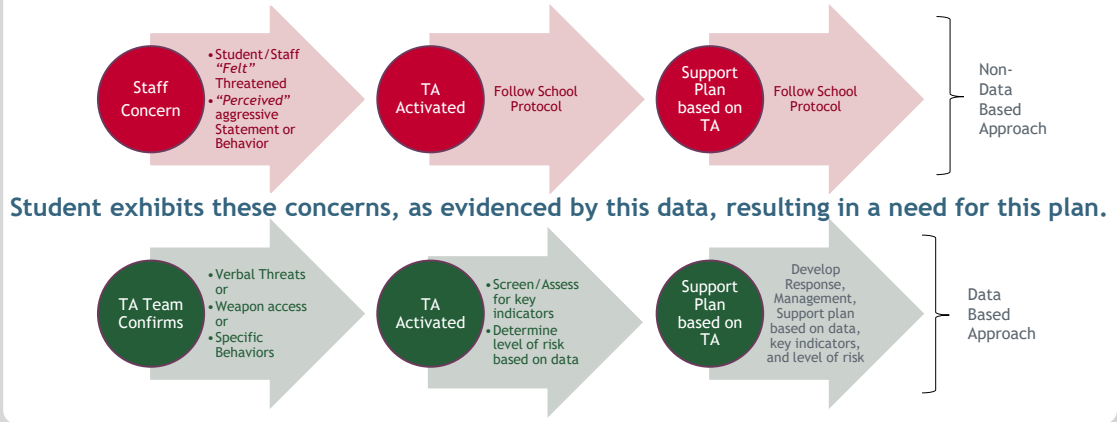
— W. Edwards Deming —

AZ QUOTES

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Collecting Data for Threat Assessment Over Time

"Soft" data ——————————————————————————→ "Hard" data

WEEK ONE — Grievance → Students/Staff Worried → Observed Concerning Behavior

Data Points Related To:
• Key Findings
• Pathway To Violence
• Behaviors of Concern
• 11 Questions
• Discipline & Legal Concerns

WEEK TWO — Indirect, veiled, and/or conditional threats made → Direct Threat Made → Broadcasting on Social Media about Mass Shootings

WEEK THREE — Boundary Probes at School (fights, trespassing) → Weapon Capacity Confirmed → Unlawful Activity on/off campus

Lower Risk ——————————————————————————→ Higher Risk

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NonData-Based vs. Data-Based Threat Assessment

Non-Data Based Approach:

- **Staff Concern** → Student/Staff *"Felt"* Threatened • *"Perceived"* aggressive Statement or Behavior
- **TA Activated** → Follow School Protocol
- **Support Plan based on TA** → Follow School Protocol
- Non-Data Based Approach

Student exhibits these concerns, as evidenced by this data, resulting in a need for this plan.

Data Based Approach:

- **TA Team Confirms** → Verbal Threats or • Weapon access or • Specific Behaviors
- **TA Activated** → Screen/Assess for key indicators • Determine level of risk based on data
- **Support Plan based on TA** → Develop Response, Management, Support plan based on data, key indicators, and level of risk
- Data Based Approach

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"Data science is all about asking interesting questions based on the data you have—or often the data you don't have."

Sarah Jarvis
Director of Applied Machine Learning and Data Science at Secondmind

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Prerequisites of Data Use

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Legal Considerations

- Illegal Activity
- LE, DHS, Juvenile Justice alignment
- FERPA
- Redacted/Unidentified data
- Monitor & address overidentification (CDE Audits)
- Central reporting systems

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TA Data Storage

- Establish secured location
- Archive previous TA data
- TA's follow students as they age up or transfer
- Real time access by team to prior TA's

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CSSRC Online Threat Assessment Tool for Data Collection and Analysis

- Statewide online form
- Secured by school district
- Able to analyze data (prevalence, race/ethnicity, gender, abilities, grade levels
- Factor analysis (effective interventions)
- Pending: Interface with SIS
- Pending: Follow student between/across school districts

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"No data is clean,
but most is useful."

Dean Abbott
Co-founder and Chief Data Scientist at SmarterHQ

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Keep Your Data "Clean" from Other Factors

Secret Service chose not to study cases when these areas were the primary focus of concern by attacker.

Type of Violence	Preferred Setting*	Motive	Primary Target	Best Practice School Response
Targeted School Violence	School	Resolve School Related Grievance or Perceived Injustice	· Students · School Staff	· School-based Threat Assessment · Ad Hoc Law Enforcement
Gang Involvement	Community	Affinity, Initiation, Retaliation, Protect Territory	· Rival Gang Members · Others for Initiation	· Law Enforcement · PD Gang Unit (e.g., GRASP) · Juvenile Justice
Drug Distribution	Community	Business, Protection Territory	· Rival Dealers · Seller/Buyer	· Law Enforcement · Narcotics Expert · Juvenile Justice
Sexual Gratification	Off Campus	Power, control	· Family or Partners · Vulnerable, Exploited & Disempowered Minors	· ISMP · Title IX · District Attorney · Juvenile Justice

*Other than Targeted School Violence, other types of violence at school setting tend to be due to incidental circumstances

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Colorado Information Sharing Statutes

Safe Schools Act

Provides schools and other agencies working with juveniles encouragement for open communication among appropriate agencies...

Children's Code

Each board of education shall cooperate... and develop written agreements with law enforcement officials, juvenile justice system, and social services to identify the *public safety concerns* for information sharing.

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Claire Davis School Safety Act

C.R.S. §24-10-106.3

Limited waiver of sovereign immunity if school fails to exercise **"reasonable care"** to protect students... from **"reasonably foreseeable"** acts of violence:

- Murder, first degree assault, or felony sexual assault
- Public schools, school districts, or charter schools

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Sample Data That Demonstrates "Reasonable Care"

Data for Screens and Assessments:
- ❑ Team was TA trained (who/when)
- ❑ Reason for Referral ("reasonably foreseeable")
- ❑ Parent Notification & Interview
- ❑ Multiple Info. Sources (triangulate data)
- ❑ Behaviors and Stressors of Concern
- ❑ Roster of Task Assignments (ROTA)
- ❑ Other Interviews, Discipline, School Record
- ❑ Determination of Risk (Criteria and Evidence)
- ❑ Attached evidence to support assessment
- ❑ Who was on team, other community partners
- ❑ Aligned with School Policy and Protocol

Data for Support (RMS) Plan:
- ❑ Plan Addresses Risk Factors,
- ❑ Consider Culture and Strengths
- ❑ Student/Family Involvement/Sig.
- ❑ Immediate Safety Measures
- ❑ Longer Term Interventions (monitoring, skill & relationship dev.)
- ❑ Monitor Progress & Communications
- ❑ Adjustments of plan based on student behavior
- ❑ Attach evidence to support plan
- ❑ Random internal/district audits (standard practice and fidelity checks)

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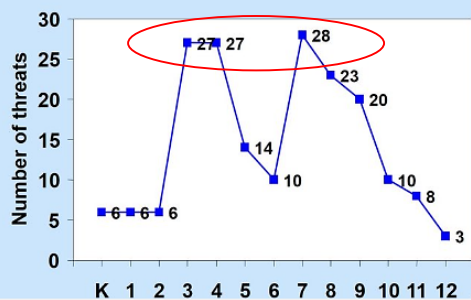# How Data Can Tell Your Story
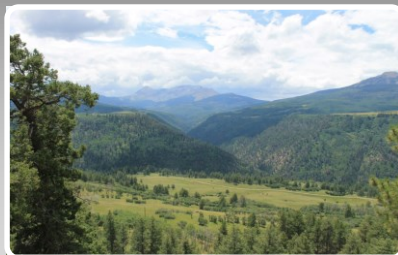
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"Data are just summaries of thousands of stories—tell a few of those stories to help make the data meaningful."

Dan Heath
bestselling author
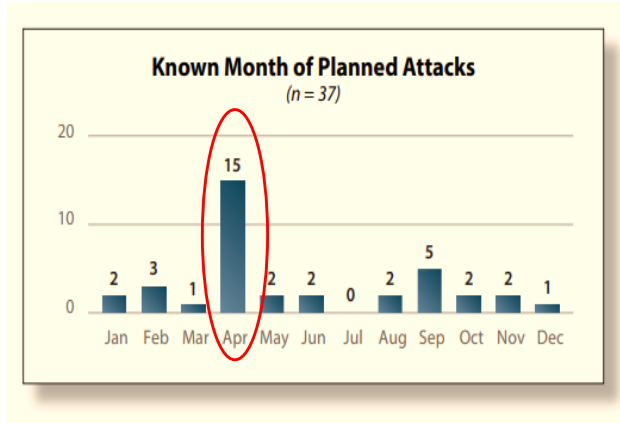
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Grade Levels for 188 Student Threats of Violence

Cornell, D., Sheras, P. Kaplan, S., McConville, D., Douglass, J., Elkon, A., Knight, L., Branson, C., & Cole, J. (2004). Guidelines for student threat assessment: Field-test findings. *School Psychology Review, 33*, 527-546.

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Known Month of Planned Attacks
(n = 37)

Secret Service, 2021

https://www.secretservice.gov/sites/default/files/reports/2021-03/USSS%20Averting%20Targeted%20School%20Violence.2021.03.pdf

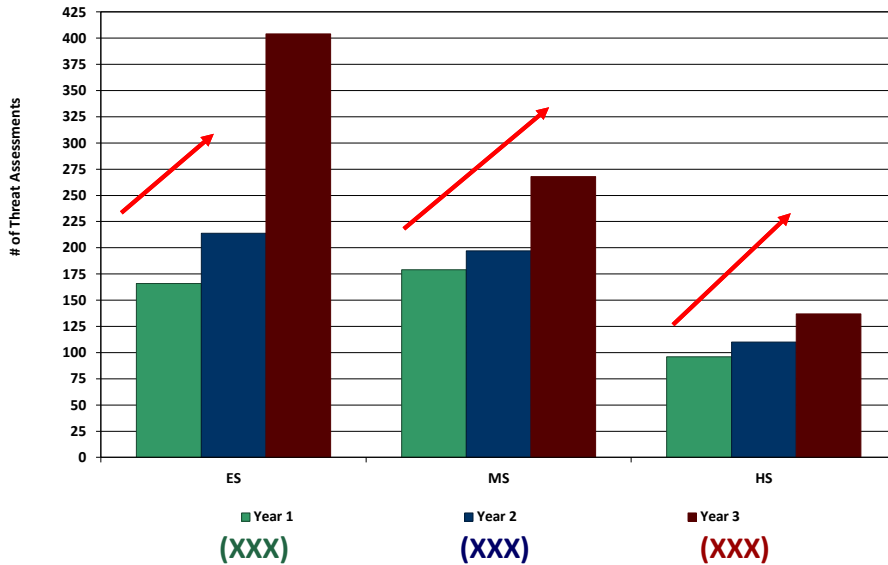Colorado School Safety Resource Center

"The core advantage of data is that it tells you something about the world that you didn't know before."

Hilary Mason
data scientist and founder of Fast Forward Labs

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Threat Assessments by Level Over Time*
(three year period)

Legend: ■ Year 1 **(XXX)** ■ Year 2 **(XXX)** ■ Year 3 **(XXX)**

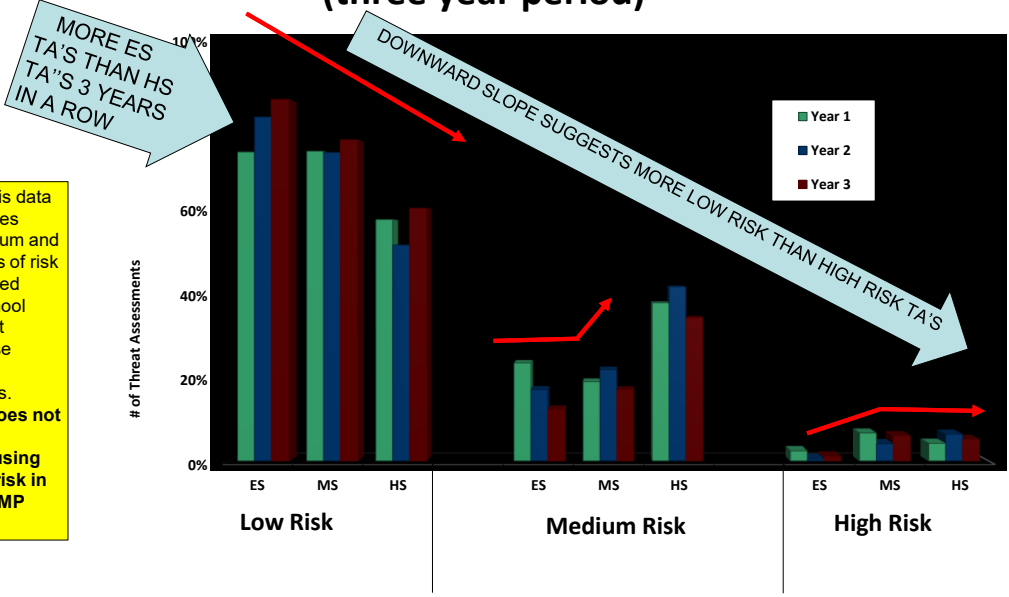# Sample Language for Developmental Trends

- Historically, during **ES**, the likelihood of an TA generally *increases* **as students get older**. In XXXX-XX, the # of TAs was high beginning in 2nd grade.

- Historically for **MS**, the # of TAs **peaked in 7th grade or** been **similar in 7th and 8th grades**. In the past 2 school years, the # of TAs was highest in **6th** grade.

- For **HS**, the likelihood of a TA generally is highest in *9th or 10th grade and then decreases* as students get older.

- The **past 3 school years** have seen **unprecedented #s** of TAs; XXXX-XX had **notably higher #s** than the previous 2 years. This pattern holds true for **all ES and MS grades**. **HS students** seem to have a *relatively more comparable # of TAs* than what has been found over time, though higher #s than have been recorded in previous years have been found at HS

"Where there is data smoke, there is business fire."

Thomas Redman
aka "the Data Doc"

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TAs by Grade & Level of Concern Over Time (three year period)

MORE ES TA'S THAN HS TA''S 3 YEARS IN A ROW

DOWNWARD SLOPE SUGGESTS MORE LOW RISK THAN HIGH RISK TA'S

NOTE: This data that includes Low, Medium and High levels of risk was adapted from a school district that made those category distinctions. **CSSRC does not train nor endorse using levels of risk in their CTAMP training**.

Legend: Year 1, Year 2, Year 3

# of Threat Assessments

Low Risk — ES, MS, HS
Medium Risk — ES, MS, HS
High Risk — ES, MS, HS

"Errors using inadequate data are much less than those using no data at all."

Scene from Hidden Figures

Charles Babbage
mathematician, philosopher, inventor, and mechanical engineer

Clip from the movie, "Hidden Figures" https://www.youtube.com/watch?v=v-pbGAts_Fg

Data analysis is a process, not an event.

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Collect and Analyze Data to Mitigate Bias

*Track threat assessment data and **use the data to inform best practices that can mitigate bias and disproportionality.** Schools and districts are encouraged to collect, analyze, and publicly report data that, at a minimum, includes the following:*

- *Numbers of threat assessments conducted, **disaggregated by identified disability, race, and ethnicity.***
- ***Outcomes of each threat assessment case** and disaggregated by identified disability, race, and ethnicity.*
- ***Referral, removal, involuntary commitment, and arrest rates** for students who have had a threat assessment conducted, and disaggregated by identified disability, race, and ethnicity.*
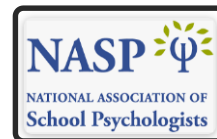
***If disproportionality** is identified for any group or subgroup of students, it is imperative that **schools immediately seek to examine factors** that contributed to identified disparities and take corrective action to promote equitable practices and outcomes.*
– NASP 2021

Upholding Student Civil Rights and Preventing Disproportionality in Behavioral Threat Assessment and Management (BTAM) 2021
https://www.nasponline.org/assets/Documents/Resources%20and%20Publications/Resources/Crisis/SSC_BTAM-SPED.pdf

Slide 1

Data can help schools track disproportionate referrals and dig deeper within a group

SED = Serious Emotional Disability
Multiple = More than one Disability
ADHD= Attention Deficit Hyperactive Disability
Autism = Students Identified with Autism

LD = Learning Disability
S/L = Speech/Language Disability
Phys = Physical Disability
Unknown = Students with other Disability

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Slide 2
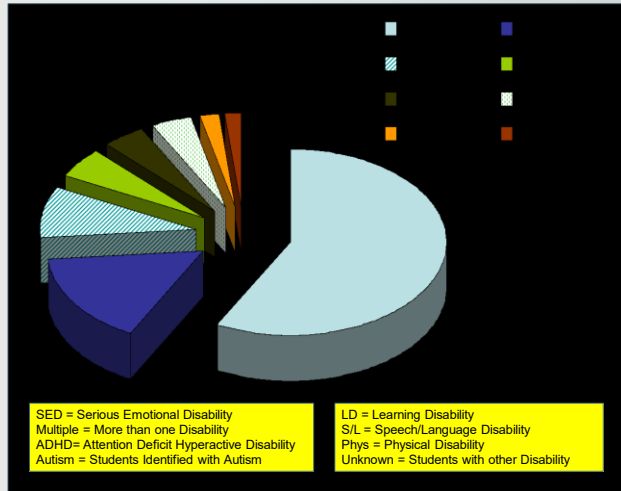
3/5/2023

Sample Black American % of Enrollment and TA's over 10 years

School Yr.	Enrollment	TA's
1	14%	25%
2	14%	22%
3	12%	17%
4	11%	21%
5	12%	24%
6	11%	20%
7	11%	14%
8	10%	16%
9	11%	13%
10	11%	16%

Despite the research that confirms no demographic tendencies of a "common" school attacker, Black Students are disproportionately referred for threatening behaviors in school, and tend to receive harsher consequences for lesser behaviors.
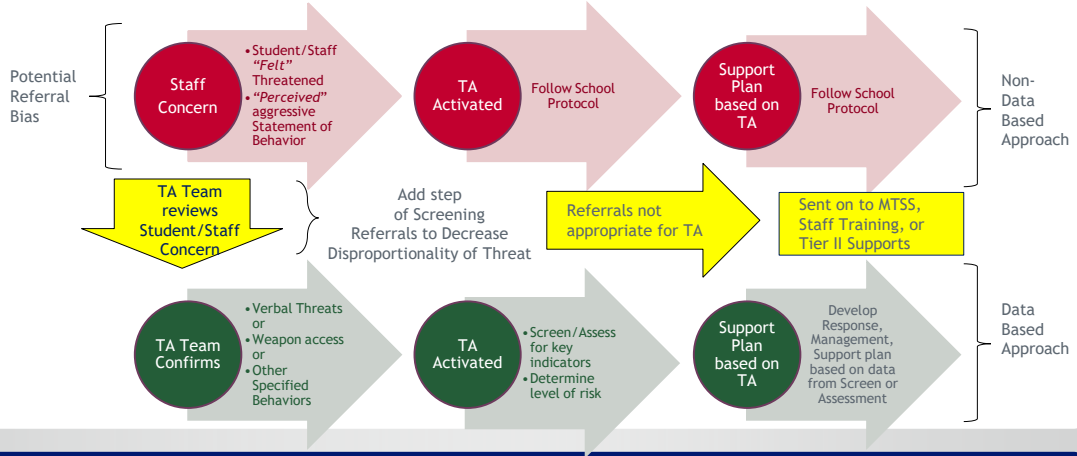**- Dr. Russ Skiba**
African American Disproportionality in School Discipline: The Divide Between Best Evidence and Legal Remedy
https://digitalcommons.nyls.edu/nyls_law_review/vol54/iss4/8/

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Add this step to address referral bias and disproportionality

Potential Referral Bias

Staff Concern
- Student/Staff "Felt" Threatened
- "Perceived" aggressive Statement of Behavior

TA Activated
Follow School Protocol

Support Plan based on TA
Follow School Protocol

Non-Data Based Approach

TA Team reviews Student/Staff Concern

Add step of Screening Referrals to Decrease Disproportionality of Threat

Referrals not appropriate for TA

Sent on to MTSS, Staff Training, or Tier II Supports

TA Team Confirms
- Verbal Threats or
- Weapon access or
- Other Specified Behaviors

TA Activated
- Screen/Assess for key indicators
- Determine level of risk

Support Plan based on TA
Develop Response, Management, Support plan based on data from Screen or Assessment

Data Based Approach

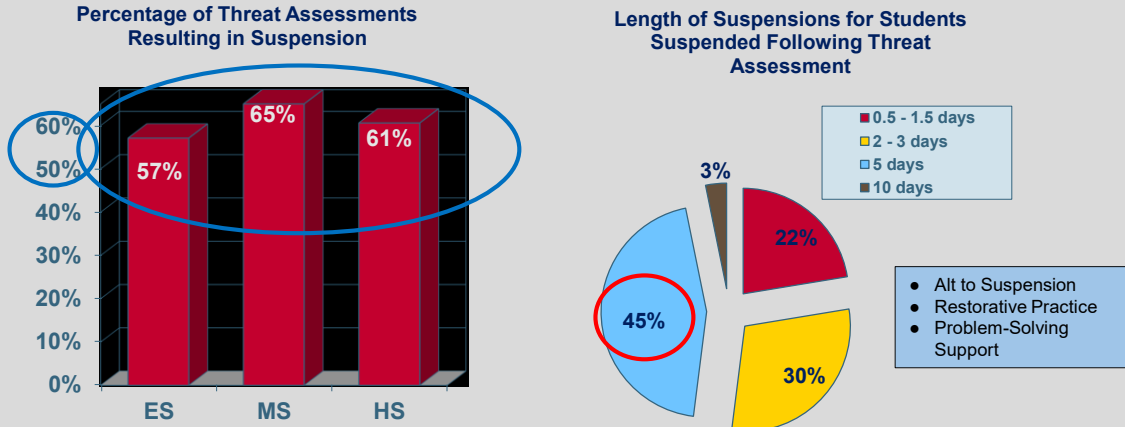Colorado School Safety Resource Center

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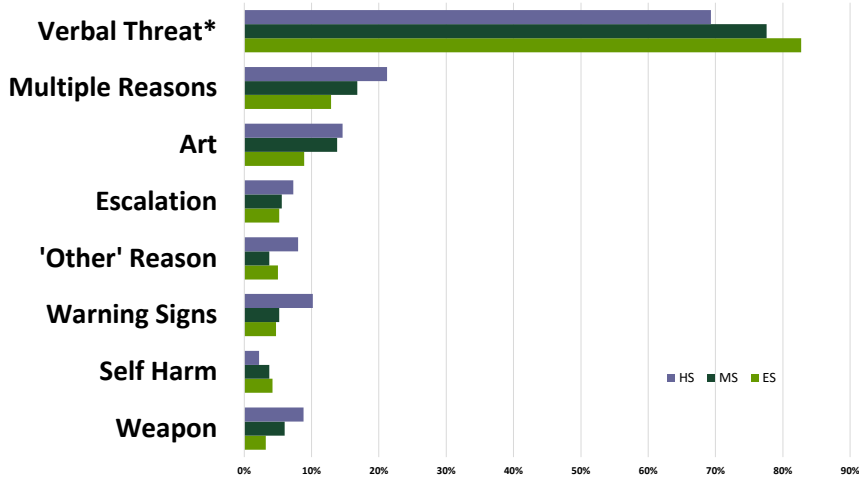If you torture the data long enough, it will confess to anything.

Ronald Coase

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Information on Suspensions For Students Suspended Following Threat Assessment

Percentage of Threat Assessments Resulting in Suspension

ES 57% MS 65% HS 61%

Length of Suspensions for Students Suspended Following Threat Assessment

- 0.5 - 1.5 days
- 2 - 3 days
- 5 days
- 10 days

3%
22%
45%
30%

- Alt to Suspension
- Restorative Practice
- Problem-Solving Support

Reason for TA by Level
Multiple Responses Possible

- Verbal Threat*
- Multiple Reasons
- Art
- Escalation
- 'Other' Reason
- Warning Signs
- Self Harm
- Weapon

HS ■ MS ■ ES

#s do not add up to 100% because TAs could have been conducted for multiple reasons.
*=significant difference across levels, $p<.05$

"Data is a tool for enhancing intuition."

Hilary Mason
data scientist and founder of Fast Forward Labs

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Sample Language for Threat Assessments Over Time

- **XXXX** (TAs) were conducted in the XXXX-XX school year. This is the **highest number of TAs reported** in a school year (by almost 300) since records have been kept. It is a 55% *increase* in the # of TAs compared to XXXX-XX and the fifth consecutive year with an increase.

- Increases were observed at all levels. **Elementary Schools (ES)** reported a XX% increase, **Middle Schools (MS)** a XX% increase, and **High Schools (HS)** a XX% increase.

- Historically, **ES** conducted fewer TAs than MS or HS, but the # of **ES TA's in** XXXX-XX **surpassed the # for HSs** X years ago **and MS** X years ago.

- In XXXX-XX, increases were observed in the # of **ES TAs, the # of schools** with TAs, and the **average # of TAs per school.**

One school shooter submitted a series of poems describing his thoughts of suicide and homicide to his English teacher. One poem read:

Am I insane
To want to end this pain
To want to end my life
By using a sharp knife
Am I insane
Thinking life is profane
Knowing life is useless
Cause my emotions are a mess
Am I insane
Thinking I've nothing to gain
Considering suicide
Cause love has died
Am I insane
Wanting to spill blood like rain
Sending them all to Hell
From humanity I've fell

"Soft data" matters too!

SOURCE: Protecting America's Schools: A U.S. Secret Service Analysis of Targeted School Violence (2019)
https://www.secretservice.gov/sites/default/files/2020-04/Protecting_Americas_Schools.pdf

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Last Thoughts

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NASP on School Violence Prevention Tip

"[It's important to] cite school safety incident data. Many school districts have local data that support a declining trend in school violence. When possible, citing local data helps families and students feel more at ease."

https://www.nasponline.org/resources-and-publications/resources-and-podcasts/school-safety-and-crisis/school-violence-resources/school-violence-prevention

What we don't know is often more scary than what we do know.

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It's not just what data you collect, it's what you do with it.

"Data will talk to you if you're willing to listen."

Jim Bergeson

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COLORADO
School Safety Resource Center
Department of Public Safety

THANK YOU FOR ALL YOU DO FOR STUDENTS!

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Resources

African American Disproportionality in School Discipline: The Divide between Best Evidene and Legal Remedy (2010)
https://digitalcommons.nyls.edu/nyls_law_review/vol54/iss4/8/

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

A Study of Pre-Attack Behaviors of Active Shooters in the United States Between 200 and 2013 (2018)
https://www.fbi.gov/file-repository/pre-attack-behaviors-of-active-shooters-in-us-2000-2013.pdf/view

Enhancing School Safety Using a Threat assessment Model (2018)
https://www.cisa.gov/sites/default/files/publications/18_0711_USSS_NTAC-Enhancing-School-Safety-Guide.pdf

Final Report and Findings of the Safe School Initiative (2004)
https://www2.ed.gov/admins/lead/safety/preventingattacksreport.pdf

Making Prevention a Reality (2015)
https://www.fbi.gov/file-repository/making-prevention-a-reality.pdf/view

Prior Knowledge of Potential School-Based Violence (2008)
https://rems.ed.gov/docs/ED_BystanderStudy.pdf

Protecting America's Schools: A U.S. Secret Service Analysis of Targeted School Violence (2019)
https://www.secretservice.gov/sites/default/files/2020-04/Protecting_Americas_Schools.pdf

Upholding Student Civil Rights and Preventing Disproportionality in Behavioral Threat Assessment and Management-BTAM (2021)
https://www.nasponline.org/assets/Documents/Resources%20and%20Publications/Resources/Crisis/SSC_BTAM-SPED.pdf