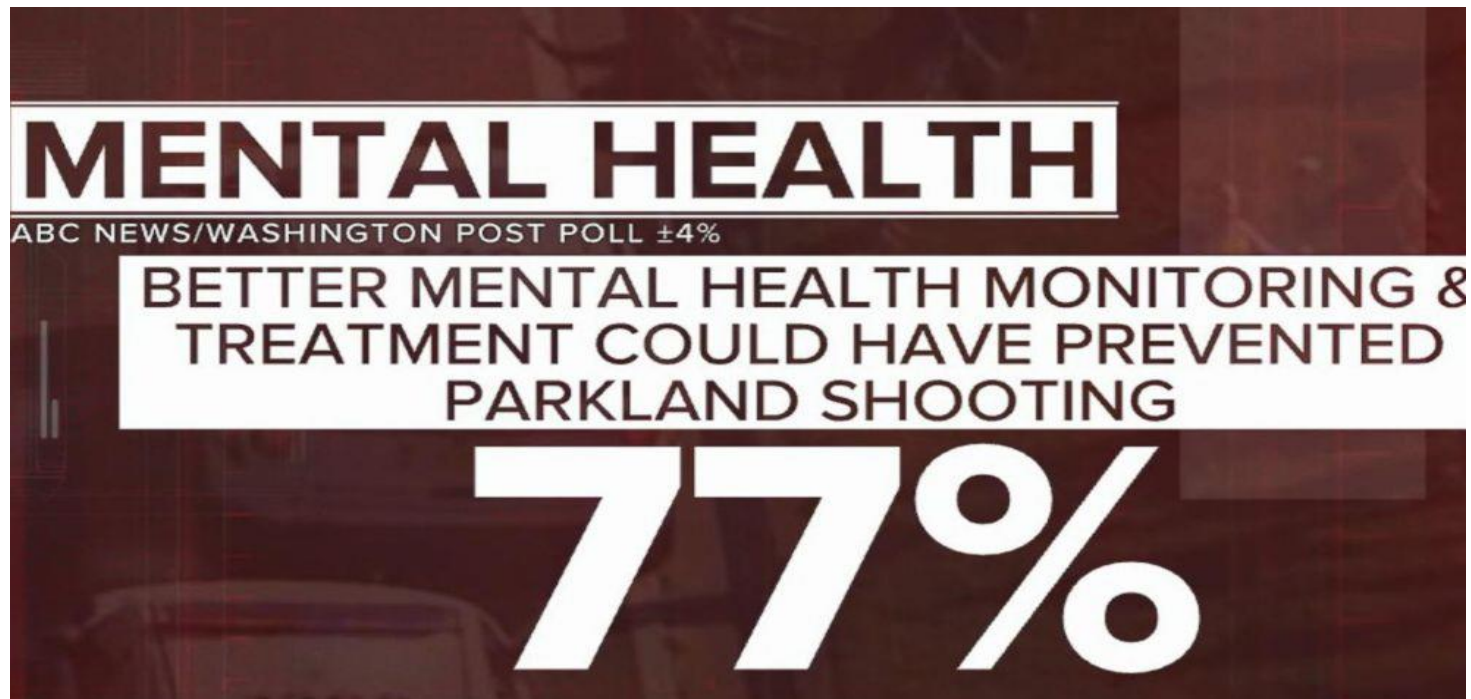


# Guns, Schools, and Mental Health



**Ryan Chaloner Winton Hall, MD**

Assistant Professor University of Central Florida College of Medicine

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Adjunct Faculty Member Barry University Dwayne O. Andreas School of Law

# Disclosures

- No relevant financial disclosures
- I am a clinical and forensic psychiatrist
- I have worked as an expert witness on cases of violence and shootings in the past (no current involvement with a school shooting case)
- General member of NRA (Thanks mom . . . received no support or information from them)
- Have been robbed at gunpoint
- Have soon-to-be school aged child

This topic makes one think of disclosures in new ways

# Do We Agree With This Statement?

“Violence of the kind perpetrated by Chris Mercer (*Oregon mass school shooter*) is **always preventable** through a combination of psychotherapy, proper medications and hospitalizations when needed. Period. There is no exception.”

Dr. Keith Ablow

# Why I Don't Believe That is True

Many factors involved in violence

- Biology
- Social
- Economic
- Political
- Health
- Developmental
- Life experience
- Substance use

# Beslan School Hostage Crisis 2004

- 1100 taken hostage (777 were children)
- 380 died, including 186 children
- Perpetrators – Chechen separatists led by Shamil Basayev.
- Demand – For Russia to end the second Chechen War.
- Day 3 – Russian security, using heavy weapons, stormed the school with troops, tanks, incendiary rockets, and other heavy weapons.

# Closer to Home 2002

## Boy, 13, Shot by Sniper at School

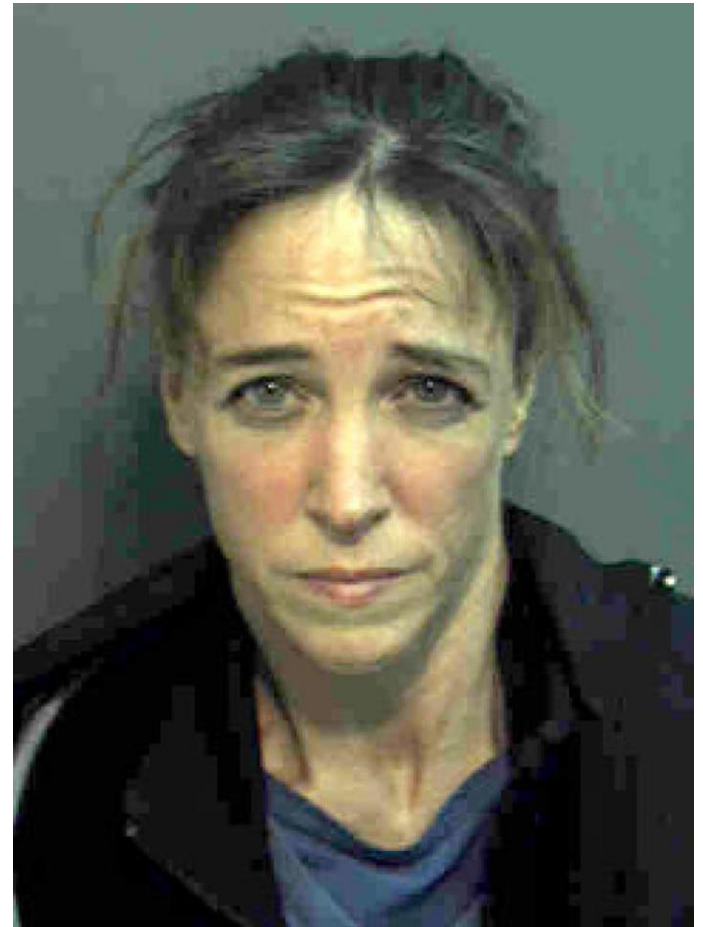
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By **Serge F. Kovalski** and **Michael E. Ruane** October 8, 2002 [✉ Email the author](#)

[Chief] Moose said: "Today it went down to the children. . . . Someone is so mean-spirited that they shot a child. . . . Now we're stepping over the line. Shooting a kid. I guess it's getting to be really, really personal now."

# Also Why I Don't Believe That is True

- Lisa Nowak – age 44 stalker packed latex gloves, a black wig, a BB pistol and ammunition, pepper spray, a hooded tan trench coat, a 2-pound drilling hammer, black gloves, rubber tubing, plastic garbage bags, approximately \$585 (USD) in cash, her computer, an 8-inch (20 cm) Gerber folding knife



# No One Predicted This . . .



Graduation photo from Naval Academy



# Gun Ownership

- What percentage of people in the USA own a gun? (varying number but roughly 25-40%)
- What percentage of mental health professionals own a gun? (no great number but some surveys say 1/10)
- Lack of knowledge may make it hard to assess risk or even raise topic with patients

Walters H, Kulkarni M, Forman J, et al: Feasibility and acceptability of interventions to delay gun access in VA mental health settings. *General Hospital Psychiatry* 34 (2012) 692-84

Appelbaum PS, Swanson JW: Gun laws and mental illness: how sensible are the current restrictions? *Psychiatric Services* 61:652-4,2010

Price J, Kinnison A, Dake J, Thompson A, Price J. Psychiatrists' Practices and Perceptions Regarding Anticipatory Guidance on Firearms. *Am J Prev Med* 2007;33(5):370-373

# Areas Of Concern With Violence Research in General

- How to test for aggression/violence?
- What are we measuring?
- Are there different types of aggression?
- Are findings applicable to treatment?
- What to do with conflicting literature?

# Important to Remember

Not all aggression and violence is pathologic



Chris Trotman, Getty Images

# Ways to Look at Violence: Disease/Contagion Model

- Violence spreads like a disease
- Can use public health tools
  - Monitoring (population level)
  - Surveillance (population level)
- Identifiable risk factors
- Clear treatment interventions
  - Mental Health (individual)
  - Public health policies (population level)

# “Werther Effect” Supports Aspects of Contagion

“There was a strong belief that *Die Leiden des Jungen Werthers (The Sorrows of Young Werther 1771)* was the impetus for many young men from all parts of Europe to dress in particular clothing (boots, a blue coat, and a yellow vest), sit at a desk with an open book, and shoot themselves over unattainable love, emulating the protagonist in the book.”

# Any Way To Prove Which Factor? Or Account For All Factors?

## Confirmed: Navy Yard Shooter Was On Anti-Depressant Trazodone

Drug linked to previous mass shooting despite Washington Post declaring it "safe"



**Paul Joseph Watson**  
Infowars.com  
September 19, 2013



It has been confirmed that Navy Yard gunman Aaron Alexis was on the anti-depressant drug Trazodone, providing yet another example of a connection between psychiatric drugs and mass shootings.

In verifying that Alexis was prescribed Trazodone by the Veterans Affairs Office, the [Washington Post published a brief article](#) downplaying the danger of the drug, quoting Miami physician Gabriela Cora who stated (almost too eagerly), "Honestly, it's a very safe drug to use."

However, the drug has been linked to a number of murders, including one mass shooting.

Trazodone is sold under the brand names Desyrel, Oleptro, Beneficat,



<http://www.infowars.com/confirmed-navy-yard-shooter-was-on-anti-depressant-trazodone/>

## House Set To Examine Link Between Video Games, Culture Of Violence In Wake Of Navy Yard Shooting

Posted: 09/20/2013 8:24 am EDT | Updated: 09/20/2013 8:37 am EDT

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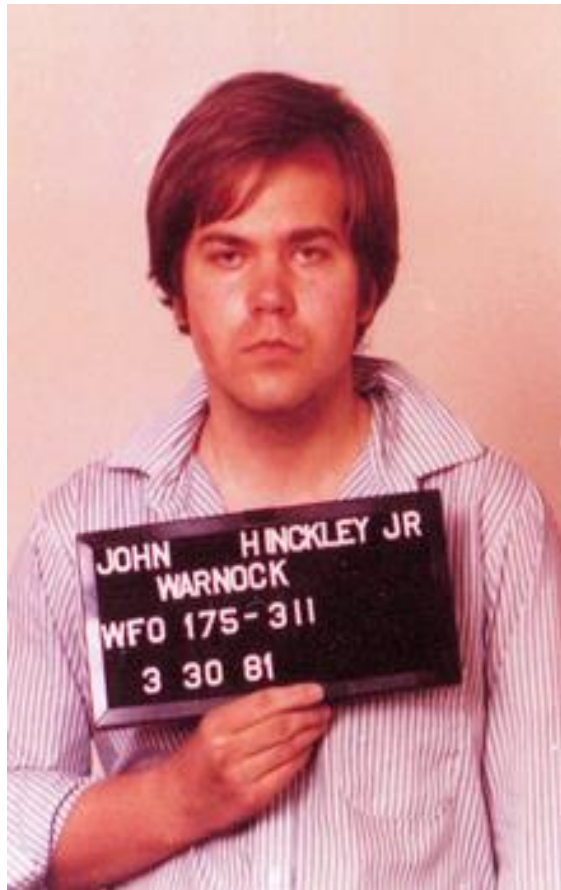
WASHINGTON -- The revelation that the man who shot and killed people at the Washington Navy Yard on Monday played violent games for up to 16 hours a day has reawakened a long-simmering debate on Capitol Hill over the potential link between such games and mass shootings.



[http://www.huffingtonpost.com/2013/09/20/video-game-lobby\\_n\\_3957441.html](http://www.huffingtonpost.com/2013/09/20/video-game-lobby_n_3957441.html)



# In Addition Anything May Become A Trigger



With movie Taxi Driver



MANSON, Charles Milles

CII 966 856

With Beatle's music



Movie Old Boy. Also won Grand Prix prize at Cannes 2004

# Have To Be Careful Of Hindsight Bias

“After Mark David Chapman shot and killed John Lennon, he calmly opened up **Catcher in the Rye** and proceeded to read it — before being apprehended.”

Catcher in the Rye has sold 65 million copies. Of the millions who have enjoyed the book, **perhaps three [e.g. Hinkley, Lee Harvey Oswald]** have become well-known assassins. **Still, we should ask: is there any merit to the book being an assassination trigger?**



# Types of Violence

**Impulsive aggression** (AKA emotional, defensive, affective) - activation of the autonomic nervous system involves

- Frontal lobes (top down)
- Temporal lobes
- Limbic system (bottom up)

Common in

- Low verbal skills (?)

Easy to study

- Animal models
- Functional lab studies

# Types Of Violence (continued)

- **Premeditated aggression** (aka predatory)- Seen in antisocial personality
  - Planned
  - Goal directed
  - Emotional detachment (?)
- Harder to study
  - Multiple factors
  - Always pathologic? (affective aggression anyone can express)
  - Clean animal model?
    - Cat and mouse

Volavka J. The neurobiology of violence: an update. J Neuropsychiatry Clin Neurosci. 1999;11(3):307-14.

Siever L. Neurobiology of aggression and violence. Am J Psychiatry. 2008 Apr;165(4):429-42

Siegel A, et al. The neurobiological bases for development of pharmacological treatments of aggressive disorders. Curr Neuropharmacol. 2007;5(2):135-47.

# Predicting the Future is Hard . . .

Clinical predictions of dangerousness by psychiatrists are “fundamentally of very low reliability.”

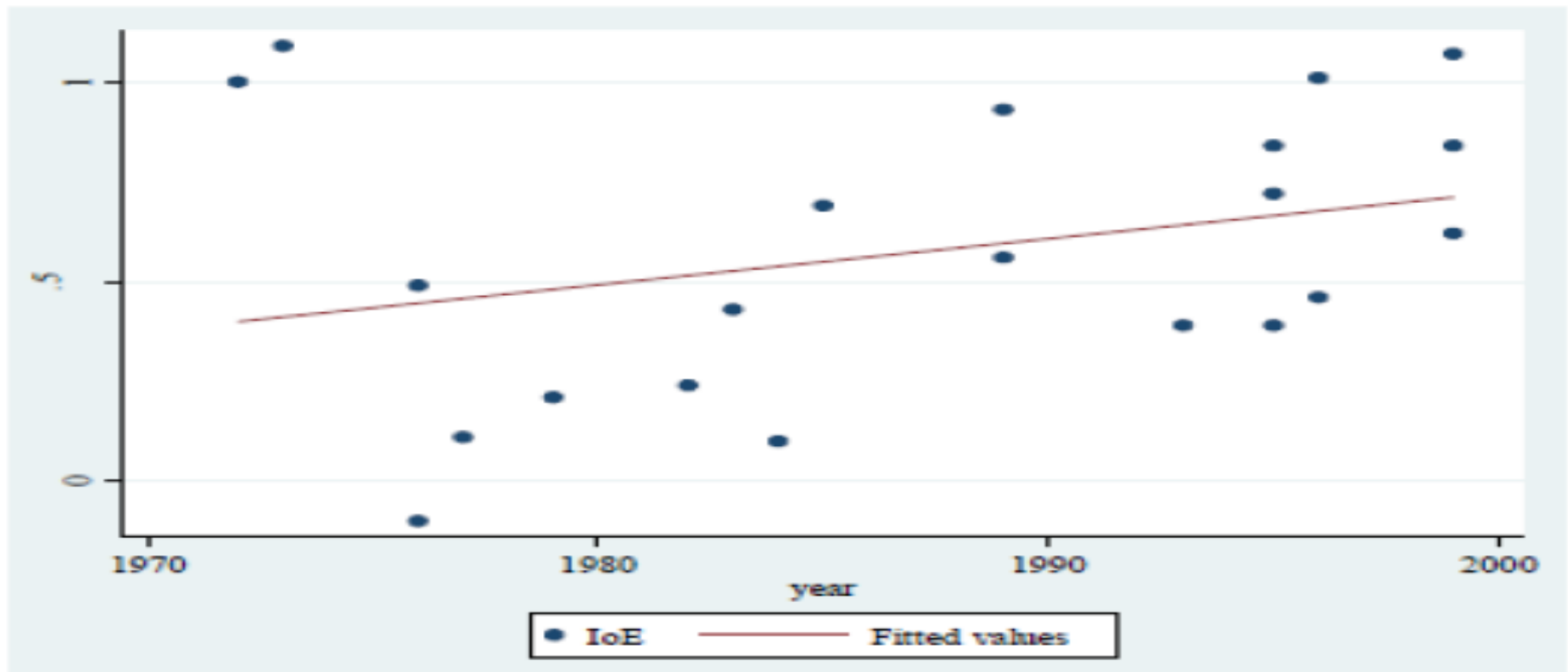
*Estelle V. Smith*, U.S. Supreme Court, 1981

“If it is not impossible for even a layperson sensibly to arrive at such a conclusion, . . . Neither petitioner, nor the APA suggests that psychiatrists are always wrong with respect to future dangerousness, only most of the time.”

*Barefoot V. Estelle*, US Supreme Court, 1983

# Granted We Are Slowly Getting Better

**Figure 1. Indices of effectiveness (IoE) of validated structured and clinical prediction studies 1970-2000 (see Buchanan and Leese, 2001, 64)**



Buchanan A, Binder R, Norko M, Swartz M. Psychiatric violence risk assessment. *Am J Psychiatry*. 2012 Mar;169(3):340

# Standardized Instruments (Strongest Support For Use In Adults?)

- Psychopathy Checklist-Revised (PCL-R)
- Violence Risk Appraisal Guide (VRAG)
- Historical/Clinical/Risk Management 20 Item (HCR-20)
- Classification of Violence Risk (COVR)

# Is This True?

- “It is well accepted that structured approaches outperform unstructured clinical judgments for the prediction of violence”
- From psychology journal looking at “forensic inpatients”
- However, “predictive validity of particular instruments may be moderated by settings, populations, and other factors”
- In other words, “context of situation” is important as well as just risk factors especially in school settings(?)
  - Recent or ongoing bullying
  - Relationship break up
  - Family strife/dynamics
  - Substance use
  - Other rejection (e.g. college or job)

# If We Are Better, Is It Translating To A Clinical Improvement?

*ANZJP Correspondence*

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## **Violence risk assessment has not been shown to reduce violence**

*Matthew M Large<sup>1</sup> and Christopher J Ryan<sup>2</sup>*

<sup>1</sup>Department of Mental Health Services, Prince of Wales Hospital, and the School of Psychiatry, University of New South Wales, Sydney, Australia

<sup>2</sup>Discipline of Psychiatry and the Centre for Values, Ethics and the Law in Medicine, University of Sydney, Sydney, Australia

### **Corresponding author:**

Matthew M Large, Department of Mental Health Services, Prince of Wales Hospital, and with the School of Psychiatry, University of New South Wales, Sydney, NSW 1360, Australia.

Large MM, Ryan CJ. Violence risk assessment has not been shown to reduce violence. Aust N Z J Psychiatry. 2015 Jan;49(1):91.

# Some Literature Says No

One implication of these findings is that, even after 30 years of development, the view that violence, sexual, or criminal risk can be predicted in most cases is not evidence based. This message is important for the general public, media, and some administrations who may have unrealistic expectations of risk prediction for clinicians.

Fazel S, Singh JP, Doll H, Grann M. **Use of risk assessment instruments to predict violence and antisocial behaviour in 73 samples involving 24 827 people: systematic review and meta-analysis.** BMJ. 2012 Jul 24;345:e4692



# The Over-prediction Problem

While research will continue to advance, the pervasive influence of base rates means that, at the **base rates of violence seen in most clinical settings** and for the foreseeable future, **no technique will be available to identify those who will act violently that will not simultaneously identify a large number of people who would not.**

# How Common Or Uncommon Is Violence In Mental Health Patients

- ECA - 17% of the sample self-reported acting violently (no harm required) in the previous 12 months
- CATIE - 6-month prevalence of assault with a weapon or causing serious injury was 3.6%
- MacArthur Foundation Study - people with mental illness in treatment and compliant with medication no different level of dangerousness than baseline neighborhood population
- Harder to predict and prevent either:
  - Common low-severity events (e.g. aggressive shove)
  - Rare high-frequency events (e.g. murder)
- We know this from suicides and self-harm behaviors

# The Under-prediction Problem Also Occurs: Eric Harris' Early Termination Recommendation For Juvenile Diversion

- **Prognosis: Good**

Eric is a very bright young man who is likely to succeed in life. He is intelligent enough to achieve lofty goals as long as he stays on task and remains motivated

- Recommendations: Successful termination

Eric should seek out more education at higher levels. He impressed me as being very articulate and intelligent. These are skills that he should grow and use as frequently as possible.

Although At Times Hard To Predict, I Do Believe  
In Common Sense And Good Clinical Judgment

Personal papers revealed an obsession with Giffords that may have dated to when Loughner confronted her during a visit to his high school, asking, "If words could not be understood, then what does government mean?" Agents pursued tips that Loughner had undergone mental health treatment. While those leads were not substantiated

# DOCUMENTING (OR WAY TO MENTALLY ORGANIZE APPROACH)

## Sample violence risk assessments note

- Risk factors identified and weighed (low, moderate, high)
- Including collateral source info if available
- Protective factors identified and weighed (low, moderate, high)
- Overall assessment rated (low, moderate, high, or range)
- Treatment and management intervention informed by the assessment
- Effectiveness of interventions evaluated

# CDC's Danger Assessment Tool - Think of Like a GAF For Homicide

## ASSAULT & HOMICIDAL DANGER ASSESSMENT TOOL

Key to Danger	Immediate Dangerousness to Others	Typical Indicators
1	No predictable risk of assault or homicide	Has no assaultive or homicidal ideation, urges, or history of same; basically satisfactory support system; social drinker only
2	Low risk of assault or homicide	Has occasional assault or homicidal ideation (including paranoid ideas) with some urges to kill; no history of impulsive acts or homicidal attempts; occasional drinking bouts and angry verbal outbursts; basically satisfactory support system
3	Moderate risk of assault or homicide	Has frequent homicidal ideation and urges to kill but no specific plan; history of impulsive acting out and verbal outbursts while drinking, on other drugs, or otherwise; stormy relationship with significant others with periodic high-tension arguments
4	High risk of homicide	Has homicidal plan; obtainable means; history of substance abuse; frequent acting out against others, but no homicide attempts; stormy relationships and much verbal fighting with significant others, with occasional assaults
5	Very high risk of homicide	Has current high-lethal plan; available means; history of homicide attempts or impulsive acting out, plus feels a strong urge to control and "get even" with a significant other; history of serious substance abuse; also with possible high-lethal suicide risk

# STAMP Acronym For Assessment Of Imminent Aggression

- Five interconnected components
  - **S**taring and eye contact
  - **T**one and volume of voice
  - **A**nxiety
  - **M**umbling
  - **P**acing

**Table 1. Risk Factors for Violence in General Psychiatric Settings**



Past history	Present circumstances and mental state
Prior violence	Male under 40
Prior arrest	Noncompliance with treatment
Young age at time of first arrest	Access to weapons
Drug and/or alcohol abuse	Role of significant other and/or caretaker (either provocative or not protective)
Cruelty to animals and people	Sees self as victim
Fire setting	Lack of compassion/empathy
Risk taking	Intention to harm
Behavior suggesting loss of control or impulsivity	Lack of concern over consequences of violent acts



# Many Of These Factors are Weighed In Standardized Instruments

## HCR-20

### ■ Historical items

1. Previous violence
2. Young age at first violent incident
3. Relationship instability
4. Employment problems
5. Substance use problems 
6. Major mental illness
7. Psychopathy
8. Early maladjustment
9. Personality disorder 
10. Prior supervision failure

- Of note, many students may not have an extensive enough history or be old enough to result in meeting factors
- Also medical/legal marijuana may affect historic studies, or way people access risk factors(?)

Of note HCR-20 looks at problems resulting from using not just use

# General Or Suggested Warning Signs For School Violence?

- Impulsive
- Obsessive nature
- Low frustration tolerance
- Inability to tolerate criticism
- Project blame on others
- Repetitive anti-social acts
- Reckless driving
- Bullied/picked on

# Warning Signs (continued)

- Egocentricity and entitlement
- Superficial relationships/few friends
- Quiet/socially awkward (? conflicting findings)
- Poor grades or drop in grades (conflicting findings)
- Financial difficulty (more of a college concern?)
- Recently asked to leave school or withdrawn but still in housing

# Unfortunately, School-Specific Signs Are Not Specific Enough

Per both the National Research Council study and the U.S. Federal Bureau of Investigation's (FBI) National Center for the Analysis of Violent Crime: there is **no accurate way to develop a profile of a school shooter and no checklist of danger signs** pointing to the next perpetrator of lethal violence in an educational environment. Further, the potential predictive factors **are so common that it would be impossible to avoid over-prediction by simply considering warning signs.**

Regehr C, Glancy G, Carter A, Ramshawe L. A comprehensive approach to managing threats of violence on a university or college campus. International Journal of Law and Psychiatry (2017). In press e-published

# For Example

- A study by Kenrick and Sheets found 73% of males undergraduates and 66% of female undergraduates reported having at least one homicidal fantasy in their lifetime.
- This is why asking follow-up questions and clinical judgment is important

# Schizophrenia & Violence

- Positive symptoms ↑ violence
- Negative symptoms ↓ violence
- Serious violence
  - Persecution/suspiciousness
  - Grandiosity
  - Hallucinations

# Symptom Of Mental Disorder: Command Hallucinations

“The weight of the evidence is that some individuals who hear commands **will act** on them. However, some studies show no link or only a weak link.”

- Suicide ~50%
- Homicide ~5%
- Injury to self or others ~10%
- Non-violent acts ~15%
- Unspecified ~15%

Braham L. et al. Acting on command hallucinations and dangerous behavior: a critique of the major findings in the last decade. Clin Psychol Rev. 2004 Sep;24(5):513-28.

Shawver F. et al. Acting on harmful command hallucinations in psychotic disorders: an integrative approach. J Nerv Ment Dis. 2008 May;196(5):390-8.

# Substance Risk: Mental Illness(?)

- In the United States, 34% of violent acts are directly attributed to substance use.
- **Urine tests were positive for illicit drugs in 37% to 59% of males arrested for violent crimes.**
- Among Finnish males, 40% of the risk for homicide was attributable to alcoholism.
- **Some studies claiming 90% of gun violence perpetrators have a mental illness (may include suicide) or is it “just substances and antisocial”**

Volavka J. The neurobiology of violence: an update. J Neuropsychiatry Clin Neurosci. 1999;11(3):307-14.

Siever L. Neurobiology of aggression and violence. Am J Psychiatry. 2008 Apr;165(4):429-42

Price J. Kinnison A. Dake J. Thompson A. Price J. Psychiatrists' Practices and Perceptions Regarding Anticipatory Guidance on Firearms. Am J Prev Med 2007;33(5):370–373



# Gun-Specific Mental Illness And Violence towards others

- Substance use is one of the most common mental illnesses associated with gun violence.
- Casiano et al. The mental illness actually most likely to result in increased threatening behavior with a gun:
  - Bipolar Disorder type I (AOR 8.46; 95% CI 4.01–17.88)
  - Drug dependence (AOR 5.59; 95% CI 3.53– 8.85)

# Seminole Study in South California Regarding Adverse Childhood Experiences (ACE)

Persons who had experienced four or more categories of childhood exposure (~6%) had a:

- 4-to 12-fold increased risks for:
  - alcoholism
  - drug abuse
  - depression
  - suicide attempt

# ACE Update (Larger National Sample)

- No ACEs were reported by 40.6% of respondents
- 1-3 by 44.1%
- 4-6 by 12.7% four to six ACEs
- 7-9 by 2.6% seven to nine ACEs

Gilbert Ik, et al. Childhood adversity and adult chronic disease: an update from ten states and the District of Columbia, 2010. Am J Prev Med. 2015 Mar;48(3):345-9.

# Violence On Campus

- Texas Bell Tower 1966 (50th anniversary recently passed)
- Montreal's Dawson College in 2006 (not just USA issue)
- Virginia Tech in 2007
- University of Iowa in 2008 (6 dead)
- Knife attack Texas CC
- UCF potential attack 2012

# Why Schools

- Common required experience for many
- Age of individuals who attend
  - More likely to be impulsive
  - Age where mental illness often first presents
- Great impact on community
  - Community identity
  - Community pride
  - Will be noticed
- Location where people first encounter rejection or failure

# High Profile Acts Of Violence At Schools

- Rare (yes are more common today, but rate same per capita)
  - Seven times more likely to be victim off campus than on campus
- However, disproportionate/more media coverage for on-campus events

# Complicating Factors To Campus Violence

- Fear
- Contagion
- Mass media
- Social media
- Open nature of campuses
- Protection of rights of those involved
- **Protection of rights of uninvolved students, especially with mental illness**

# Mental Health Survey In 2013 Based On Healthy Minds Data (College Based)

- 14,175 students completed the survey, (44% participation rate)
- Positive screens
  - 17.3% for depression
  - 4.1% for panic disorder
  - 7.0% for generalized anxiety
  - 6.3% for suicidal ideation
  - 15.3% for nonsuicidal self-injury



# Guns Are Not The Only Weapon Of Mass Violence In Schools

- 2010 - rash of knife attacks at schools in China (~5 attacks)
- 68 children killed (?), more wounded
- Government action
  - Registration to buy knife
  - Trained school personnel
  - Executed first attacker
- 2012 - another attack ~20 children stabbed
- 2014 – Large-scale terroristic knife attack at train station. 10 attackers killed 29 and injured 130

<http://www.cnn.com/2010/WORLD/asiapcf/05/15/china.kindergarten.attack/index.html>

<http://www.cnn.com/2010/WORLD/asiapcf/05/02/china.attacks/index.html>

<http://www.usatoday.com/story/news/world/2014/03/01/knife-men-china-train-station/5924345/>

# Now Is The Time (?)(January 2013)

The President's plan includes:

- Closing background check loopholes to keep guns out of dangerous hands
  - Encourage doctors to report to law enforcement
  - Expanding databases
  - Clarify HIPAA (Concerns on privacy)
- “Banning military-style assault weapons and high-capacity magazines, and taking other common-sense steps to reduce gun violence”
- Making schools safer
- Increasing access to mental health services (ACA already passed by this time)

# Now Is The Time: Increasing Access To Mental Health Services

- Provide “Mental Health First Aid” training for teachers
- Make sure students with signs of mental illness get referred to treatment
- Support individuals of ages 16 to 25 at high risk for mental illness
- Help schools address pervasive violence
- Train more than 5,000 additional mental health professionals to serve students and young adults

# Potential Concern

“The fear they engender can often drive radical policy change, in some cases leading to the implementation of bad policy”

Reddy, M., Borum, R., Berglund, J., et al. Evaluating risk for targeted violence in schools: Comparing risk assessment, threat assessment, and other approaches. *Psychology in the schools*. *Psychology in the Schools*, 2001. 38(2), 157–172.

[https://www.washingtonpost.com/blogs/compost/wp/2013/03/05/pop-tart-gun-suspension-seriously-folks/?noredirect=on&utm\\_term=.b883c536ab23](https://www.washingtonpost.com/blogs/compost/wp/2013/03/05/pop-tart-gun-suspension-seriously-folks/?noredirect=on&utm_term=.b883c536ab23)

# What Universities Are Doing

- 80% now have some sort of threat assessment team
- 90% have emergency response plans in place and many have lockdown plans

# Types of Threats Assessment Teams Are Usually Involved In

- Clearly-identified target (think Tarasoff)
- Random large-scale violence (think Columbine High School)
- Cyber threats (think Facebook post)
  - “I dreamed I killed everyone and my dreams have a tendency to come true”
- Usually Not looking at
  - random violence (e.g. locker room)
  - mob events (e.g. winning championship)
  - general crime

# Teams Usually Consist Of

- Campus police/resource officer
- Student life professionals
- Administrators
- Mental health professionals
  
- Team's purpose is to
  - determine level of risk
  - manage/mitigate strategies

# Virginia Threat Assessment Model

- Identifying threats including communications that emerge from interactions with any members of the community
- Evaluating the seriousness of the threat on a continuum
  - Figure of speech or jokes
  - Concerning physical behavior (attention-seeking and/or thrill at causing a disruption)
  - Specific warning of impending violence



# Virginia Threat Assessment Model

- Intervention including warning potential victims and taking protective action
- Follow-up monitoring of the safety plan

# Questions



ariesgdim 2012©