

# Thinking about the link between mental illness and violence

Edward P. Mulvey, Ph.D.

*Professor of Psychiatry Emeritus*

*Department of Psychiatry*

*University of Pittsburgh School of Medicine*

# Goals of presentation

- Summarize the relationship between mental illness and violence
- Why the assumed link matters for policy and practice
- The flaws in the logic that promotes the belief
- The importance of differentiating risk status from risk state
- A few things we do know about the link
- Some useful things to consider when assessing potential for violence

**Violence and mental Illness are  
linked, but not strongly linked**

# Research Summary

- Epidemiological studies show an association of symptom reports and involvement in violence (about  $r = .20$ )
- Most mentally ill people are not violent, and most violence is not done by mentally ill individuals
  - Only a small part of the violence in our society is attributable to individuals with mental illness (4% to 10%)
  - Almost a third of individuals with mental illness report being a victim of violence within the past six months; over twice as likely as the general population
- Hitting someone is the most frequent type of violence involving individuals with mental illness
- Even in individuals with mental illness who are violent, symptom changes are not always related to reported violence (in only about 12% of the incidents)

**Nonetheless.....**

**Belief in the strong association  
between serious mental health  
disorders and violence persists**

“....There was a period, in the 1960s and 1970s, when mental illness was celebrated in films like ‘One Flew Over the Cuckoo’s Nest’ as a plausible response to an insane society. It was an entertaining literary conceit....but it ignored the reality of....the near-weekly nutjobs who attack schools and fast-food restaurants, take hostages at malls, or merely wander the streets babbling incoherently, threatening bystanders and scaring the bejeezus out of everyone. We have a responsibility to protect ourselves against these people...” –*Joe Klein, Swampland*

60% of American public believe that people with schizophrenia are likely or very likely to be violent

**Why does this matter?**

# Promotes Stigma

- Employment
- Housing
- Social Integration
- Use of mental health services



**“Hard cases” and “great cases”  
make bad law and policy**

*Great cases, like hard cases, make bad law. For great cases are called great, not by reason of their importance in shaping the law of the future, but because of some accident of immediate overwhelming interest which appeals to the feelings and distorts the judgment.<sup>1</sup>*

—Oliver Wendell Holmes (1904)

# Gun policy and people with mental disorders

# Federal Firearms Policy

- Gun ownership is a Constitutional right:

*District of Columbia v. Heller*, 554 U.S. 570 (2008) and *McDonald v. Chicago*, 561 U.S. 3025 (2010) affirmed that the Constitution confers an individual right to keep and bear arms

- Right is “not unlimited”

Court emphasized that “nothing in our opinion should be taken to cast doubt on longstanding prohibitions on the possession of firearms by felons and the mentally ill.”

- Problem is not guns, but instead how to best to identify people who should not have access to guns

18 U.S.C. 922(d) states that the following people are prohibited from possessing or purchasing a firearm if (among other things)

- committed to a mental institution
- adjudicated as a mental defective
- Legal authority determines: dangerous or incompetent to manage own affairs due to a mental illness, incompetent to stand trial, or acquitted by reason of insanity

# Agreed upon “Solutions”

“Everyone” can agree to leave the issue of regulating gun sales and liability alone as long as we put more money into mental health care

- Inefficient

*and*

- Ineffective

# Flawed Logic: Mental Illness and Violence

- Post-diction is not pre-diction

# Rampage Killers



Doing something “crazy” doesn’t mean the person has a mental illness

# “Conditional probabilities” are not the same going backwards as forwards

*If...*

60% of cocaine users start on marijuana

*and....*

75% of marijuana smokers drank mother's milk

*that does not mean that....*

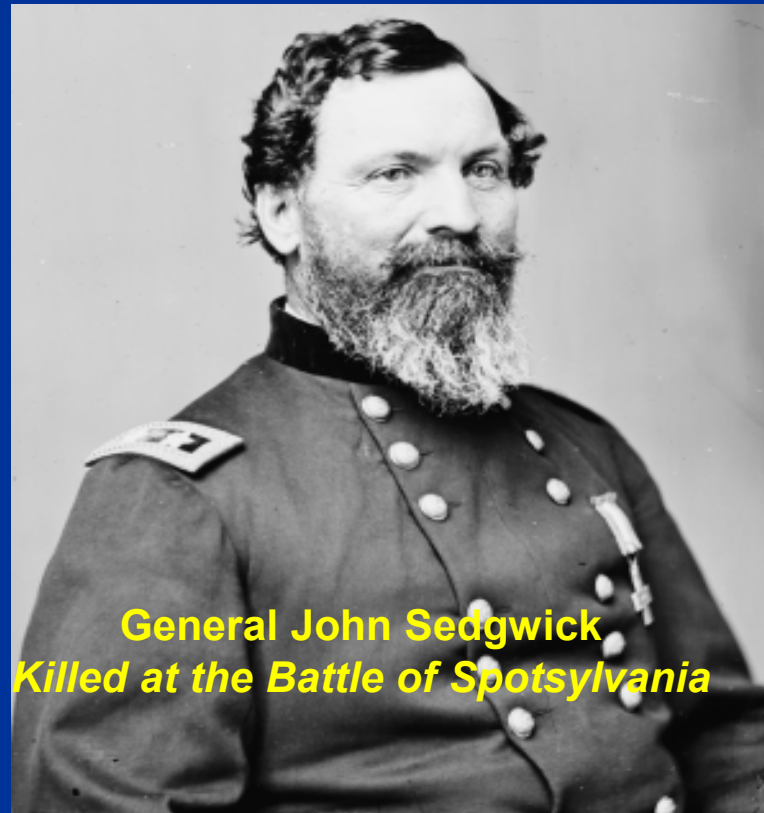
Mother's milk leads to cocaine use



# Flawed Logic: Mental Illness and Violence

- Post-diction is not pre-diction
- Confident prediction does not mean better prediction

Just believing it strongly  
doesn't make it a better prediction



General John Sedgwick  
*Killed at the Battle of Spotsylvania*

# Flawed Logic: Mental Illness and Violence

- Post-diction is not pre-diction
- Confident prediction does not mean better prediction
- Prediction is not explanation

# Mental Illness is not a concrete classification

- Mental illness is a chronic disease that ebbs and flows; it is not a state of constant being
- Need to think in terms of “risk status” and “risk state”
  - *risk status* identifies groups at higher likelihood for violence
  - *risk state* indicates when something is most likely to happen

# Assesment instruments for Risk Status

Base choice of tool on

## *Person characteristics*

- Mental health consumers: HCR-20, Webster et al., 1995; VRAG, Harris et al., 1993; MacArthur ICT, Monahan et al., 2019
- Juvenile offenders: EARL-20B, Augimeri et al., 1998; Youth Risk Checklist, Borum, 2000; SAVRY, Borum, 2021

AND

## *Behavioral outcome of interest*

- Domestic violence: SARA, Kropp et al., 1994
- Sex offense: SVR-20, Boer et al., 1997; SORAG, Rice & Harris, 1997; STATIC-99 or , SONAR, Hanson & Bussiere, 1998, Hanson & Harris, 2000.

# Limitations of Structured Assessment Tools

- Ceiling on their predictive validity
- Best at identifying “true negatives”
- Outcomes may be inherently biased (e.g., rearrests for violence)
- Professionals don't use them
  - Don't fit with professional practice
  - Seen as threatening clinical skills
  - Increase liability

# Utility of Structured Assessment Tools

- Inclusion of “needs” in the assessment
  - Possible areas to address
  - Risk-Needs-Responsivity (RNR) assessments
- Screening for further assessment
- Anchoring clinical judgment
- Refining group to receive interventions

**So what do we know about  
assessing the chances for violence  
in individuals with mental illness?**



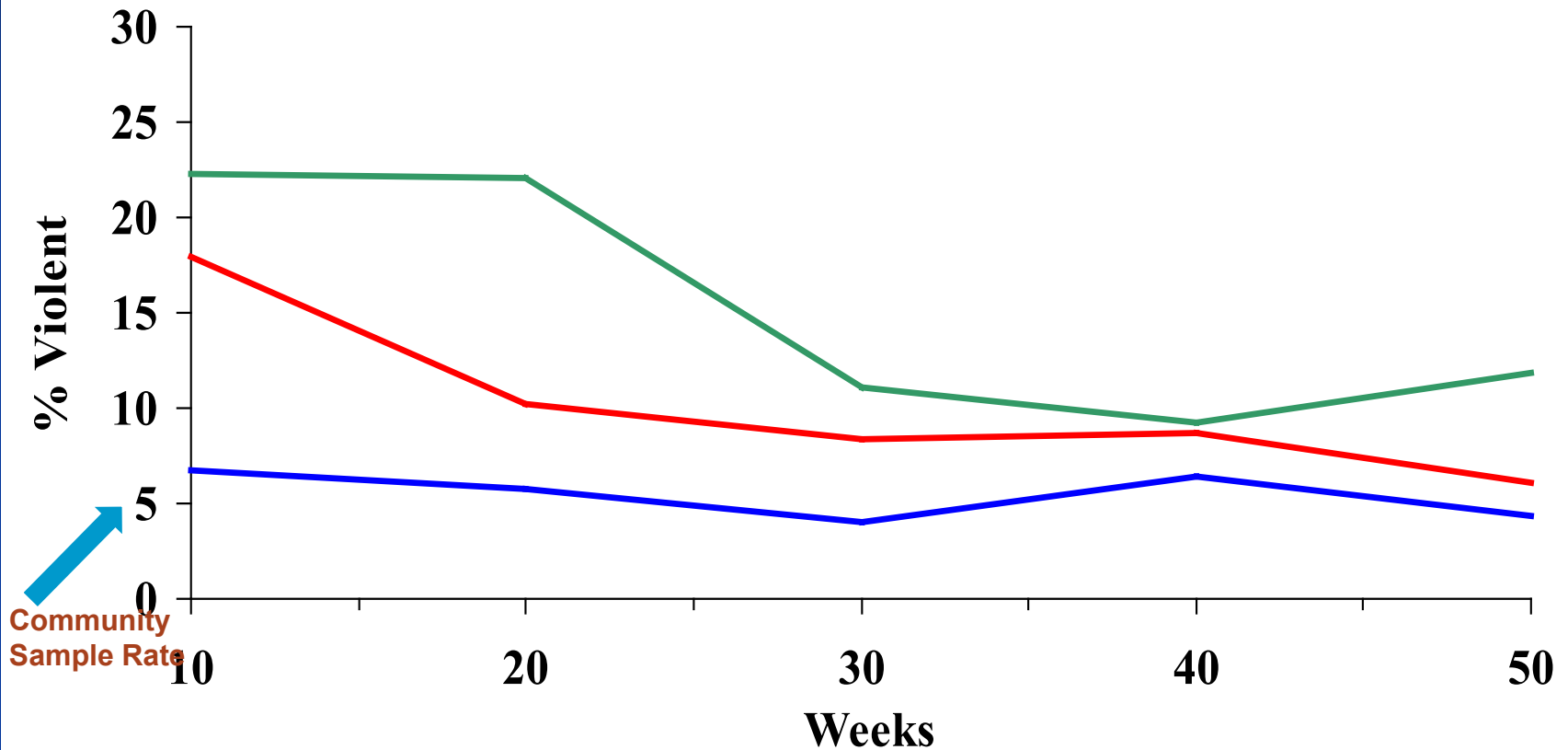
**Violence in individuals with  
mental illness looks mostly like  
violence in other individuals**

# Targets of Violence

Type of Target	% of Violent Acts	
	Patients	Community
Family	54.5	48.1
Friends/Acquaintances	34.9	29.6
Strangers	10.7	22.2

**People are most at risk shortly  
after their hospital stay**

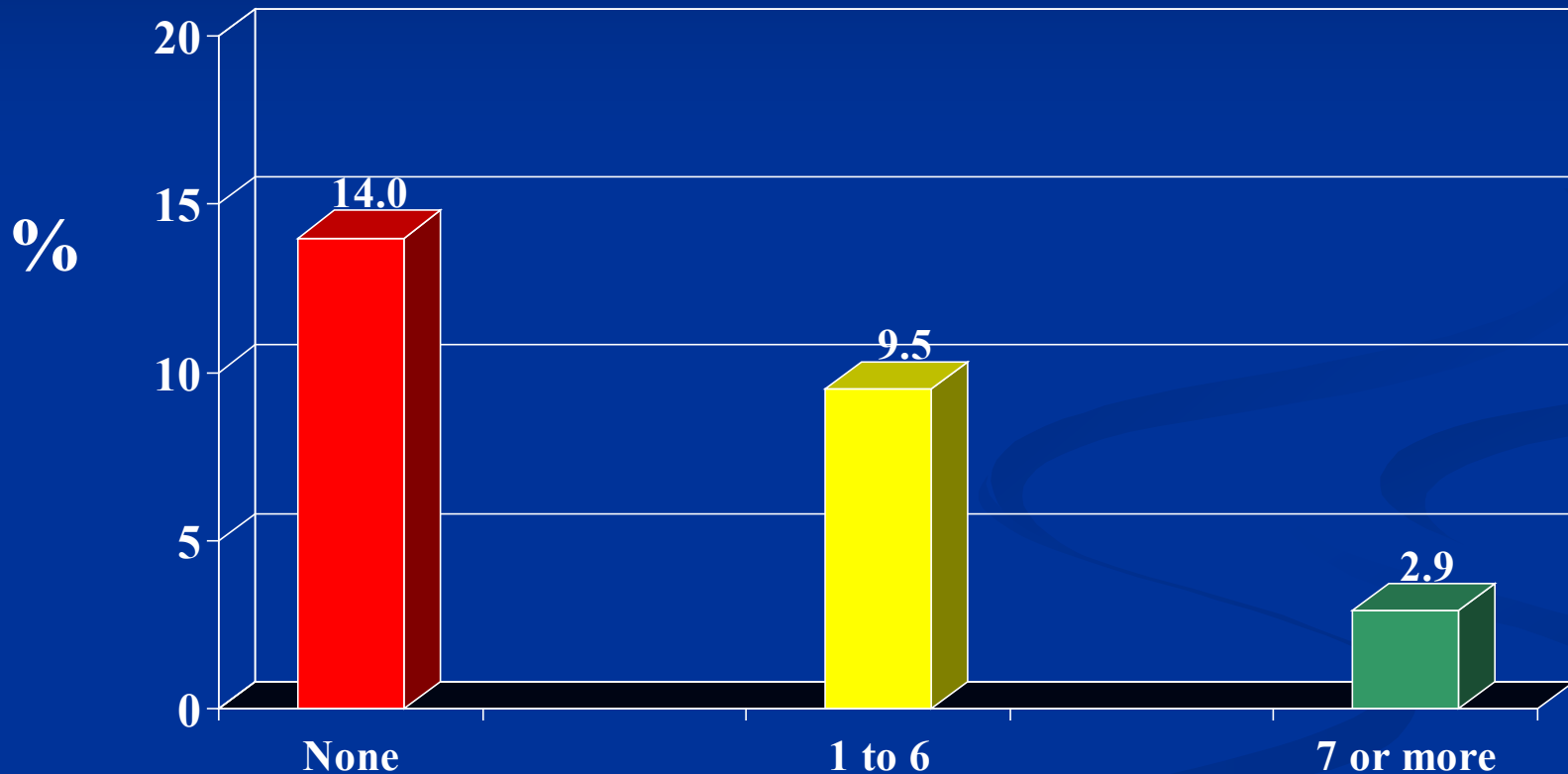
# Violence by Diagnostic Group



- Major Mental Disorders and No Substance Abuse
- Major Mental Disorders and Substance Abuse
- Other Mental Disorders and Substance Abuse

# Engagement in treatment matters

# Violence in Follow-up 2 with Treatment Sessions Attended in Follow-up 1



Statistically significant, controlling for age, gender, race, education, marital status, substance use, diagnosis, and prior violence.

**A look at individuals with histories  
of violence and mental health  
disorders over time**

# Odds ratios for substance use and violence one day apart for serious violence

Day Before	Day After			
	Serious Violence	Alcohol	Marijuana	Other Drugs
Serious Violence	5.4	1.9	1.5	2.1
Alcohol	2.4	9.5	2.1	2.8
Marijuana	1.6	2.3	31.5	1.5
Other Drug	1.5	2.2	1.5	48.1



# Events Cluster

Case 8



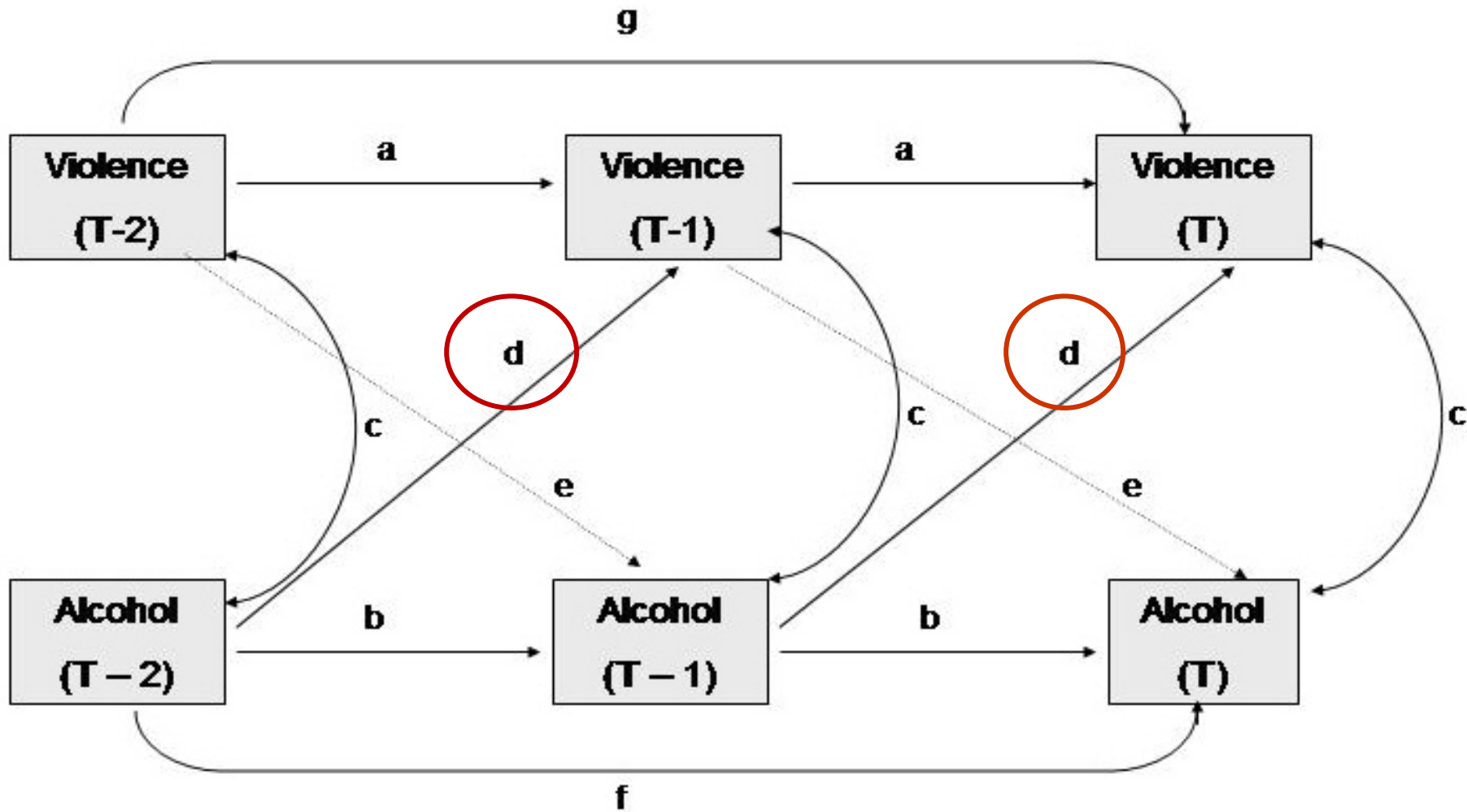
Case 2080



# Odds ratios for substance use and violence one day apart for serious violence

Day Before	Day After			
	Serious Violence	Alcohol	Marijuana	Other Drugs
Serious Violence	5.4	1.9	1.5	2.1
Alcohol	2.4	9.5	2.1	2.8
Marijuana	1.6	2.3	31.5	1.5
Other Drug	1.5	2.2	1.5	48.1

# Cross lagged time series model for violence and alcohol use

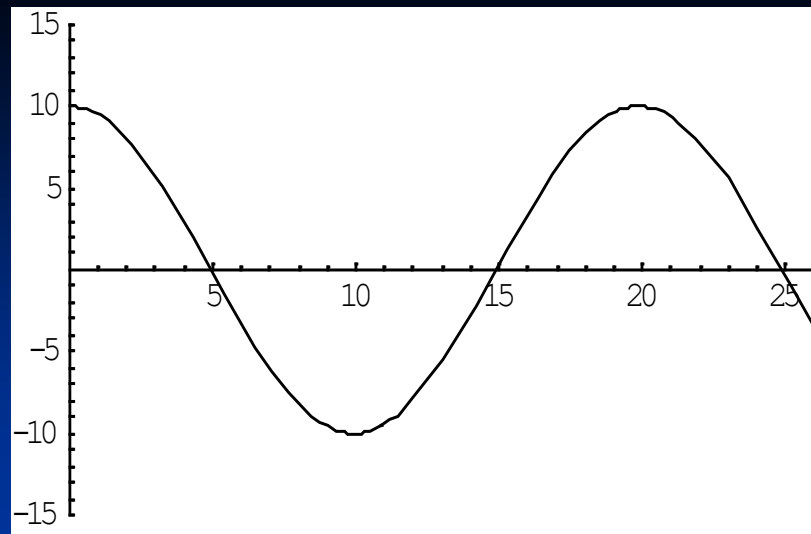
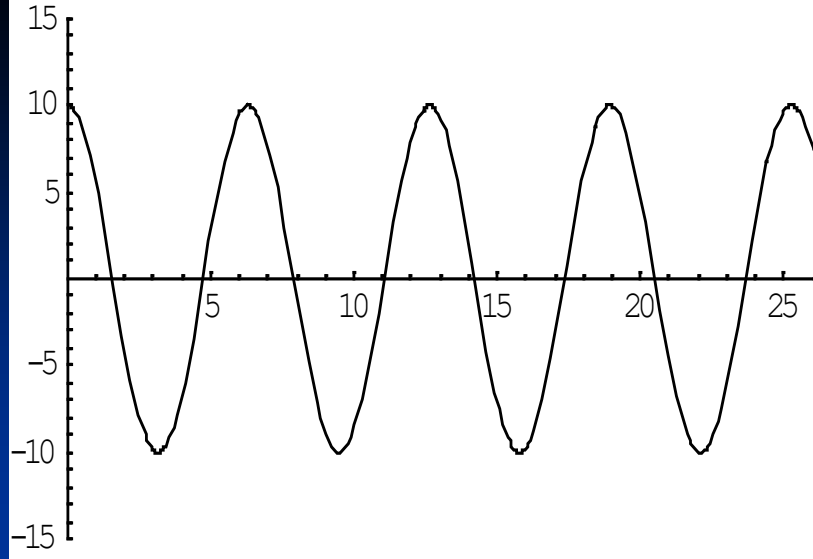


# Findings

- Evidence for a lagged effect for alcohol use (greater than three drinks) on violence, but not the other way around
- No significant lagged relationships either way for marijuana use or other drugs
- Use of multiple substances on prior day also increases likelihood of violence
- Even controlling for different types of substance use, violence on one day still predicts violence for the next day

# Symptom level is not really predictive of violence

- No evidence that levels of specific symptoms cause violence, except for measure of hostility
- This hostility measure is probably best thought of as indicator of increased anger state or emotional dysregulation
- Lability of symptoms over time does seem to matter



High Oscillation  
group 2.7 times  
more likely to  
engage in serious  
violence

**Assess what seems to matter**

# Best Bets for Assessment

- history
- impulsivity (process from ideation to action)
- active hostility and anger
- drug and alcohol use
- psychopathy
- perceived threat
- trauma
- coping strategies
- opportunities for violent encounters



**Ask the person about violence**

# Conclusions

- More violence than we might expect
- Mental disorder alone is not a great predictor
- Drug and alcohol use consistently a factor
- Openly address the issue and assess it systematically with an eye toward management

THANK YOU