Traumatic Events and Substance Use

Demands on the Substance Abuse Treatment Delivery System

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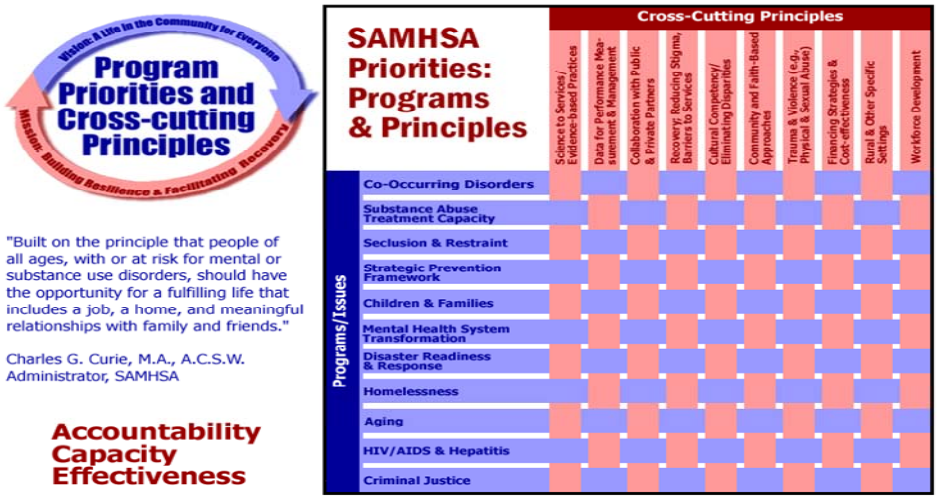
The SAMHSA Matrix



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Trauma

- An event that involves actual or threatened death or serious injury or threat to one's physical integrity
- Directly experienced, witnessed or learned about events

Traumatic Events Experienced Directly

Military combat

Natural or manmade disaster

Being kidnapped

Being taken hostage
Terrorist attack
Torture
Concentration camp internee
Severe auto accidents
Violent personal assault
- Sexual Assault
- Physical Attack
- Robbery
- Muggery

Life threatening illness
Prisoner of War

Traumatic Events Witnessed

- Violent assault
- Accident
- War
- Disaster
- Unexpected witnessing a dead body or remains

Traumatic Events Experienced or Learned About

Family Member or Close Friend

- Violent personal assault
- Serious accident
- Serious injury experienced
- Sudden, unexpected death
- One’s child has a life-threatening disease

Symptoms of Trauma

- Sense of numbing
- Sense of detachment

- Absence of emotional responsiveness
- “Being in a daze”
- Derealization
- Depresonalization
- Decreased recall of important aspects of the trauma
- Recurrent
  - Images
  - Thoughts
  - Dreams
  - Illusions
  - Flashbacks
- Reliving the experience
- Distress on reminders of event

Symptoms of Trauma *cont.*

- Marked avoidance of stimuli that arouse recollections of the trauma
  - Thoughts, feelings, conversations, activities, places, people
- Marked symptoms of anxiety or increased arousal
  - Difficulty sleeping, irritability, poor concentration, hypervigilance, exaggerated startle response, motor restlessness

Symptoms of Trauma *cont.*

- Distress
- Impairment in social, occupational or important areas of functioning
- Impairment of ability to pursue some necessary task

Time Course

Acute Stress Disorder

- Lasts for a minimum of 2 days and a maximum of 4 weeks
- Occurs within 4 weeks of the trauma

Post Traumatic Stress Disorder

- Acute—less than 3 months duration of symptoms

- Chronic—symptoms last longer than 3 months
- Delayed Onset—6 months between trauma and onset of symptoms

Mass Media: Degrees of Trauma According to Levels of Exposure

Directly experienced
Witnessed
Learned about events

"No Wrong Door"—SA Delivery System and Trauma

Trauma (no symptoms)▲→Stress Symptoms (resolved) ▲→Acute PTSD (resolved) **OR** Delayed PTSD (resolved) ▲→ Chronic PTSD▲

▲ **=** Intervention points for the Substance Abuse Delivery System following a traumatic event

SA Treatment and Trauma

- Nature, duration, proximity and severity of the traumatic event
- Preparedness and training of staff within the treatment delivery system
- Ability of substance abuse treatment delivery staff to recognize symptoms of stress within staff and among patients

SA Treatment and Disaster or Terror

- Excessive use of alcohol or drugs in response to trauma
- Increased demand for services from people with life time histories of substance related disorders
- Increased demand for services from people with current substance related disorders

Resolving the Confusion Between Substance Use

and Substance Use Disorders in Disaster Response

- Researchers only appear to be divided on the question of whether substance use increases following a disaster
- The key difference appears to be in classification schemes that define substance use disorders versus increase in substance use
- Substance Use Increases Alone Do Not Qualify as Substance Use Disorders, but create potential public health and public safety problems

SUBSTANCE DEPENDENCE [DSM-IV]

"A maladaptive pattern of substance use, leading to clinically significant impairment or distress, as manifested by three (or more) of the following, occurring at any time in the same 12-month period:"

1. Tolerance
2. Withdrawal
3. The substance is often taken in larger amounts or over a longer period than was intended
4. There is a persistent desire or unsuccessful efforts to cut down or control substance use

SUBSTANCE DEPENDENCE [DSM-IV] *cont.*

"A maladaptive pattern of substance use, leading to clinically significant impairment or distress, as manifested by three (or more) of the following, occurring at any time in the same 12-month period:"

5. A great deal of time is spent in activities necessary to obtain the substance or recover from its effects
6. Important social, occupational, or recreational activities are given up or reduced because of substance use
7. The substance use is continued despite knowledge of having a persistent or recurrent physical or psychological problem that is likely to have been caused or exacerbated by the substance.

SUBSTANCE ABUSE [DSM-IV] *cont.*

"A maladaptive pattern of substance use, leading to clinically significant impairment or

distress, as manifested by one (or more) of the following, occurring at any time in the same 12-month period:"

1. Recurrent substance use resulting in a failure to fulfill major role obligations at work, school, or home

2. Recurrent substance use in situations in which it is physically hazardous

3. Recurrent substance-related legal problems

4. Continued substance use despite having persistent or recurrent social or interpersonal problems caused or exacerbated by the effects of the substance

The symptoms have never met the criteria for Substance Dependence

"Increased Use of Cigarettes, Alcohol, and Marijuana among Manhattan, New York, Residents after the September 11th Terrorist Attacks"

- Vlahov et al reported that 3.3% of respondents started using cigarettes in the week after 9/11/01, but did not use the week before
- 19.3% started drinking alcohol the week after, but did not use the week before
- 2.5% began using marijuana the week after, but did not use the week before

Am J Epidemiol 2002; 155:988-96

Users Used More After 9/11/01

- Vlahov et al reported that among those who already smoked cigarettes before 9/11/01, 41.2% smoked more cigarettes after
- Among those who drank alcohol, 41.7% drank more alcohol after

Am J Epidemiol 2002; 155:988-96

Population Estimates

- Vlahov et al estimate that 265,00 people increased their use of any of the substances in question
  - 89,000 smoked more cigarettes
  - 226,000 consumed more alcohol
  - 29,000 used more marijuana

Am J Epidemiol 2002; 155:988-96

Substance Use and Trauma

- Alcohol consumption often increases following a disaster
  - After Hurricane Hugo beer consumption rose 25%
  - After the Oklahoma City bombing, alcohol consumption in the year of the bombing was 2.5 times greater than a control community

Smith et al, J Oklahoma State Med Assoc (1999)

Anti-Anxiety Drug Use Jumps

- NDCHealth compiled data for the *Washington Post*
  - Nationally, Washington DC area and New York City area—including Putnam, Richmond, Rockland and Westchester counties
- Number of prescriptions for alprazolam—week ending 9/28/01
  - 22% greater in New York
  - 12% greater in DC
  - 9% greater Nationally

Susan Okie, *Washington Post*, October 14, 2001

Anti-Anxiety Drug Use Jumps *cont.*

- Use of lorazepam increases
  - 19% in New York
  - 16% in D.C.
  - 6.3% Nationally
- Use of diazepam increases
  - 14% in D.C.

- 8% in New York
- 3% Nationally

Susan Okie, *Washington Post*, October 14, 2001

Substance Use Increases, but Substance Abuse Disorders Don't After a Disaster

- During the immediate post disaster period, increases in alcohol consumption and other substance use can create behavioral and social problems which should be addressed
- Increased alcohol consumption may increase problems such as DUI, domestic violence, child neglect and work place absences.
- Increases in substance use appears to reflect an attempt to cope with post disaster effects

Acts of Terrorism and Tragedy

September 11, 2001

- An increase in sedatives as a means of self-medication
- A decrease in the use of alcohol and other drugs with the passage of time for most people
- A decrease in psychological symptoms associated with the trauma with the passage of time

Decrease in Symptoms of Stress

- A few days after the 9/11/01 attacks
  - 71% of the respondents reported depression
  - 49% complained of difficulty concentrating
  - 33% reported insomnia
- Three weeks after the attacks
  - 42% of the respondents reported depression
  - 21% complained of difficulty concentrating
  - 18% reported insomnia

Oklahoma City Bombing

April 19, 1995

- 34 % of survivors had PTSD 4–8 months later
- 63% of those with PTSD also had a co-morbid condition
  - 32% drank alcohol to cope
- Of those with a non-PTSD diagnosis
  - 40% drank alcohol to cope
  - 27% took medications

North, CS et al, *JAMA*, 282(8):755-762(1999)

Oklahoma City Bombing ***cont.***

April 19, 1995

- 4% of direct survivors had PTSD 18–36 months later
- 7% rate of alcohol or drug use by survivors for any time since the bombing as measured 18-36 months later.
- as time passes sub-syndromal conditions may dominate over formal diagnostic conditions

Shariat et al, J Oklahoma Med Assoc, Vol 92: 178-186 (1999)

Oklahoma City Bombing ***cont.***

April 19, 1995

- 4 months after event and 18 months later
- Reported a higher rate of increased alcohol use in the general population
  - 5% in 1995
  - 3% in 1996
  - Compared with 2% and 0.9%, respectively, in the control city of Indianapolis

Smith et al, J Oklahoma Med Assoc, Vol 92: 193-198 (1999)

The effect of a severe disaster on the mental health of adolescents

Reijneveld et al of the Netherlands found that adolescents exposed to a disaster undergo increases in self-reported

- Anxiety
- Depression
- Thought problems
- Aggression
- ALCOHOL USE

Lancet 2003; 362: 691-96

Symptoms and Pathology

- Increased symptoms, medication or substance use does not mean increased psychiatric pathology, substance abuse or dependence
- Ignoring symptoms may mean ignoring pathology

Trauma and PTSD

- A lifetime prevalence of PTSD of 7.8% for the general population
  - 5% - men
  - 10.4% - women
- 60.7% of men and 51.2% of women had experienced at least one traumatic event during their lifetime

Kessler et al, Arch Gen Psychiatry 52:1048-1060 (1995)

Trauma and PTSD *cont.*

- A lifetime prevalence of PTSD of 9.2% for a urban population of young adults aged 21-30
  - 6% - men
  - 11.3% - women
- Experienced at least one traumatic event during their lifetime
  - 43.01% - men
  - 36.71% - women

Breslau et al, Arch Gen Psychiatry 48:216-222 (1991)

Previous Exposure to Trauma

- Subjects (18-45 y/o) with previous trauma were significantly more likely to experience PTSD than were subjects with no previous exposure to trauma
- Risk of PTSD varies by type of index trauma
  - assaultive violence produces the highest risk, greater than 10 times the risk associated with learning about a trauma to a love one

Breslau et al, Am J Psychiatry 156:902-907 (1999)

Previous Exposure to Trauma *cont.*

- The risk of PTSD from the index trauma associated with previous assaultive violence persisted over time with no change
- The effects of trauma from non-assaultive violence decreased by an estimated 8% per year

Breslau et al, Am J Psychiatry 156:902-907 (1999)

Gender Differences and PTSD

- Females are more likely to develop PTSD from exposure to trauma
- Women's higher risk of PTSD is not attributable to sex differences in history of previous exposure to trauma

Breslau et al, Am J Psychiatry 156:902-907 (1999)

Traumas in Adolescents in Treatment for Alcohol Abuse and Dependence

- Adolescents with alcohol dependence or alcohol abuse had higher trauma occurrence rates than controls
- Gender was associated with sexual abuse, which was more common in females, and violent victimization, which was more common in males.

Clark, D et al, J. Am. Acad.Child Adolesc. Psychiatry, 36:1744-1751 (1997)

"Attack Anxiety Triggers Jump in Illegal Drugs; Treatment centers full; risky behavior could lead to increase in crime, illness"

- "Substance abuse counselors say that the anxiety created by the disaster, coupled with anthrax scares and job losses, especially among low-income populations, are driving chronic and former substance abusers to seek comfort in drugs as well as alcohol."
  – Judith Messina, Crain's New York Business (November 12, 2001)
- New York City's "Health and Hospitals Corp, which operates about 30 substance abuse treatment centers, says that demand for its services has risen about 5% over the past two months."
- "St. Barnabas Hospital in the Bronx says it has seen a small increase in relapses."
- South Nassau Communities Hospital's Oceanside Counseling Center in Oceanside, L.I, estimates that its relapse rates are hovering between 10% and 15%, compared with less than 5% before the disaster.

Judith Messina, Crain's New York Business (November 12, 2001)

PTSD and Substances of Abuse

- Substance users experienced more traumatic events than non-users
- The experience of a qualifying PTSD event varies by type of substance used
  - 43% of polydrug or cocaine/opiate users
  - 23% of pill/hallucinogen users
  - 18% of marijuana users
  - 16% of heavy alcohol users

Cottler et al, Am J Psychiatry 149:664-670 (1992)

Traumatic Events and Current Drug Users

- 36% (n=166) experienced a traumatic event
- Persons exposed to a traumatic event were more likely to meet the criteria for
  - antisocial personality disorder
  - affective disorder
  - schizophrenia
  - generalized anxiety disorder
- 18% of the sample had PTSD

Cottler et al, Comprehensive Psychiatry 42:111-117 (2001)

Traumatic Events and Current Drug Users *cont.*

Events	Women (n-57)	Men (n- 109)
Rape	44%	3%
Sudden Injury	11%	16%
Seeing someone hurt/killed	35%	45%
Physical assault	11%	33%
Threat	12%	16%

Cottler et al, Comprehensive Psychiatry 42:111-117 (2001)

PTSD in SA Treatment Patients

- 29% of the sample of methadone treated patients met the criteria for life time PTSD
  - 53% - women
  - 14% - men
- 55% of those with a history of PTSD reported symptoms in the past 6 months

Clark et al, J of Substance Abuse Treatment 20:121-127 (2001)

Traumatic Events and SA Treatment Patients *cont.*

Events	Women (n=59)		Men (n=91)	
	No. Events	%	No. Events	%
Rape	24	46.1%	2	3.2%
Seeing someone hurt/killed	20	38.5%	34	54.0%
Physical assault	8	15.4%	27	42.8%
Total	52	100%	63	100%

Clark et al, J of Substance Abuse Treatment 20:121-127 (2001)

Traumatic Events and SA Treatment Patients *cont.*

(n=288)	Women		Men	
Events	No. Events	%	No. Events	%
Rape	33	29.2%	2	0.6%
Seeing someone hurt/killed	12	10.6%	105	28.9%
Physical Assault	36	31.9%	75	20.7%
Threat	10	8.8%	40	11%

Wasserman et al, Drug and Alcohol Dependence 46:1-8 (1997)

PTSD in SA Treatment Patients *cont.*

- 37.4% of the sample of 91 Canadian treated patients met the criteria for life time PTSD
  - Proportion of women meeting criteria did not differ significantly

- 15.4% of the sample were classified with possible PTSD

Bonin et al, J of Behav Ther. & Exp. Psychiatr 31:55-66 (2000)

Traumatic Events in Substance Users

Canadian Sample

Events	Women (n=30)	Men (n=61)
Rape	53.3%	8.2%
Sudden injury	33.3%	44.3%
Seeing someone hurt/killed	36.7%	57.4%
Physical assault	66.7%	70.5%
Threat	43.3%	44.3%

Bonin et al, J of Behav Ther. & Exp. Psychiatr 31:55-66 (2000)

Pre-Index Trauma

(graphic)

If we don't ask, they won't tell

- It is important for SA treatment providers to recognize that traumatic events leave their imprints of patients
- Disasters, terrorist attacks, and other generalized traumatic events may activate pre-existing PTSD or compound the effects of previous trauma
- If clinicians don't inquire about the effects of a traumatic event, many patients will not discuss them

SA Treatment Programs and Trauma Issues

- SA Treatment programs should routinely assess patients for histories of traumatic events and for the diagnosis of PTSD
- SA Treatment programs should offer therapeutic experiences designed to focus on histories of trauma and of PTSD

- SA Treatment programs should be prepared to address disasters and terrorist attacks

Assessment of Trauma in SA Programs

- The Trauma History Questionnaire
  - Lists 23 traumatic events in 3 categories
    - 4 crime related
      - e.g, Mugging, robbery, witnessing a house break-in
    - 13 general disasters and trauma
      - e.g., car accident or natural disaster
    - 6 unwanted physical and sexual experiences
      - e.g,, rape and physical assault
- The Addiction Severity Index (ASI)
  - May be used to suggest a need for a more careful review

Public Health Campaign for Early Intervention Strategy - *Disasters and Terrorist Attacks*

- Fear
- Panic
- Stress
- Dysfunctional coping

Public Health Strategies and Specific Populations

- General populations
- Vulnerable populations
  - Histories of previous trauma
  - "Ground Zero"
  - Substance abuse histories
  - Mental health Issues
  - 1st responders

Substance Abuse Providers and Disaster or Terrorist Attack - *General Population*

- Educate about stress, coping and substance use
- Appear on local radio, TV or in local newspaper describing ATOD component of disaster preparedness and reaction
- Work with faith community, Red Cross, and other community groups to offer discussions and information about PTSD and ATOD

Substance Abuse Providers and Disaster or Terrorist Attack - *Special Population*

- Address Administrative Issues
  - Treatment Program Disaster Plans
  - Staff knowledge and preparedness
  - Treatment Program Operations
- Address Staff Morale Issues
  - Support
  - Concerns about Self and Family
  - Safety
- Address Patient Issues

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