Psychoactive Substances

Psychoactive substance - is any chemical that can alter a person's perceptions, feelings, behaviors, or thoughts.

A psychoactive substance can be a medicine, plant derivative or industrial product. Psychoactive substances used will vary from setting to setting.

Alcohol

- Current (past month) use - At least one drink in the past 30 days - 52% (131 million people) aged 12 or older.
- Binge use - Five or more drinks on the same occasion (i.e., at the same time or within a couple of hours of each other) on at least 1 day in the past 30 days. – 24% (60 million people) aged 12 or older.
- Heavy use - Five or more drinks on the same occasion on each of 5 or more days in the past 30 days – 7% (17 million people) aged 12 or older.

Tobacco

- **Current (past month) use - 28% (70 million people) aged 12 or older.**

Illicit Drugs

(marijuana/hashish; prescription-type psychotherapeutics used nonmedically. cocaine/crack; heroin, hallucinogens, inhalants)

- Current (past month users) aged 12 or older (2010 NSDUH).
  - 8.7% (21.8 million) of the population are illicit drug users.
    - 6.6% (16.7 million) of the population are current marijuana users .
    - 2.8 % (7 million) of the population are current prescription type psychotherapeutic drugs used nonmedically.
      - 2.1% pain relievers.
      - 0.8% tranquilizers.
      - 0.5% stimulants.
      - 0.1% sedatives.

    - 0.7% (1.6 million) of the population are current cocaine users.
      - 0.1% (359,000) of the population are current crack users (2009 NSDUH).
    - 0.5% (1.3 million) of the population are current users of hallucinogens (e.g., ecstasy).
    - 0.2 % (500,000) of the population are current users of methamphetamine.
    - 0.1 % (213,000) of the population are current users of heroin.

(2009 NSDUH)

Illicit Drug or Alcohol Use Treatment and Treatment Need

- In 2009, 23.5 million persons aged 12 or older needed treatment for an illicit drug or alcohol use problem (9.3 percent of persons aged 12 or older). Of these, 2.6 million (1.0 percent of persons aged 12 or older and 11.2 percent of those who needed treatment) received treatment at a specialty facility. Thus, 20.9 million persons (8.3 percent of the population aged 12 or older) needed treatment for an illicit drug or alcohol use problem but did not receive treatment at a specialty substance abuse facility in the past year. These estimates are similar to the estimates for 2008 and for 2002.

- Of the 2.6 million people aged 12 or older who received specialty substance use treatment in 2009, 949,000 received treatment for alcohol use only, 739,000 received treatment for illicit drug use only, and 756,000 received treatment for both alcohol and illicit drug use. These estimates are similar to the estimates for 2008 and for 2002.

What is Trauma?

- The American Psychiatric Association *Diagnostic and Statistical Manual* (DSM-IV) defines a "traumatic event" as one in which a person experiences, witnesses, or is confronted with actual or threatened death or serious injury, or threat to the physical integrity of oneself or others. A person's response to trauma often includes intense fear, helplessness, or horror.
- Trauma can result from experiences that are "private" (e.g. sexual assault, domestic violence, child abuse/neglect, witnessing interpersonal violence) or more "public" (e.g. war, terrorism, natural disasters).
- Trauma is becoming increasingly recognized as a significant factor in a wide range of health, behavioral health, and social problems. Trauma resulting from prolonged or repeated exposures to violent events can be the most severe.

(The Science of Trauma)

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
  - Mugging
- Life threatening illness
- Prisoner of War

(Clark, 2006)

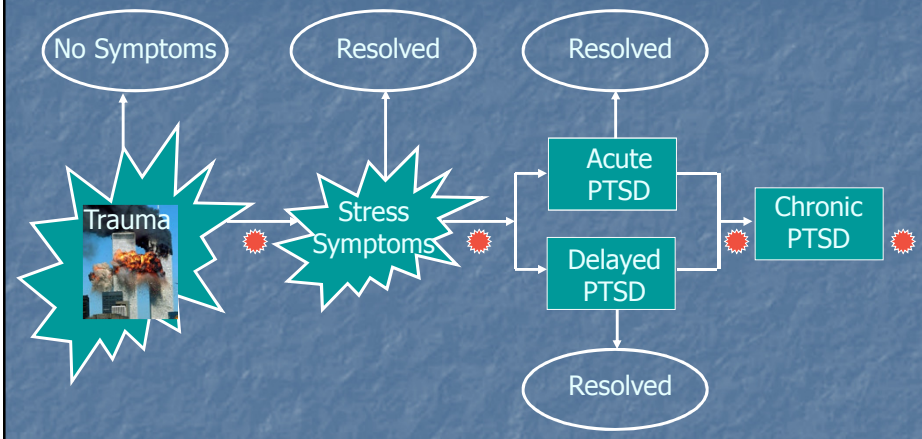
Traumatic Events: Factors Related to Developing PTSD

Event Related Factors

Person Related Factors

(Clark, 2006)

Substance Abuse Delivery System and Trauma



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

(Clark, 2006)

Substance Abuse Treatment and Trauma Considerations

- 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.

(Clark, 2006)

Resolving the Confusion Between Substance Use and Substance Use Disorders in Disaster Response

- Researchers 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 increases in substance use.
- Substance use increases alone do not qualify as substance use disorders, but create potential public health and public safety problems.

(Clark, 2006)

What has research shown about substance use following Oklahoma City Bombing?

Four studies on the aftermath of the bombing of the Murrah Federal Building in Oklahoma City found only minimal increases in alcohol use, abuse, or dependence.

1. North et al. (1999) conducted diagnostic interviews with 192 highly exposed survivors and found no new onset substance use (alcohol or drug) disorders. This finding is striking in light of the high prevalence of other psychological disorders in the sample.

What has research shown about substance use following Oklahoma City Bombing? (con't)

2. Shariat et al. (1999) surveyed 494 victims directly involved in a traumatic event about various medical problems. At a rate of 7%, alcohol use was among the least frequent problems. The most prevalent new medical conditions were auditory problems (32%), anxiety (28%), and depression (27%).

3. Smith et al. (1999) conducted a population survey of the Oklahoma City metropolitan area using Indianapolis as a control community. The rates of increased use of alcohol were approximately 2% and 1% in the two communities respectively.

4. North (2001) found a high lifetime rate (50%) of alcohol abuse/dependence among the firefighters who worked in Oklahoma City. None of these disorders began after the disaster. Other studies of incidents of mass violence yielded similar results.

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

- 3.3% of respondents started using cigarettes in the week after 9/11/01.
- 19.3% started drinking alcohol the week after.
- 2.5% began using marijuana the week after.
- Among those who already smoked cigarettes before 9/11/01, 41.2% smoked more cigarettes after.
- Among those who drunk alcohol, 41.7% drank more alcohol after.

(Vlahov et al., 2002)

Substance Use before and six months after September 11 of New York City residents (n=1570)

Substance	% used substance 30 days before September 11	% used substance past 30 days	% reporting an increase in use of substance since September 11
Cigarettes	22.9	24.8	9.9
Alcohol	34.1	39.3	17.5
Marijuana	4.8	5.2	2.7

(Vlahov et al., 2004)

What has research shows about substance use following September 11th terrorist attacks?

- Vlahov et al. (2002) found increases in cigarette smoking, alcohol consumption and reported marijuana use in lower Manhattan 5-8 weeks after the terrorist attacks of September 11, 2001 (compared with the month prior to 9/11).
- PTSD and depression were more common among those individuals who increased consumption.
- The authors hypothesized that increase in the use of different substances was related to the presence of different pre-morbid psychiatric conditions.

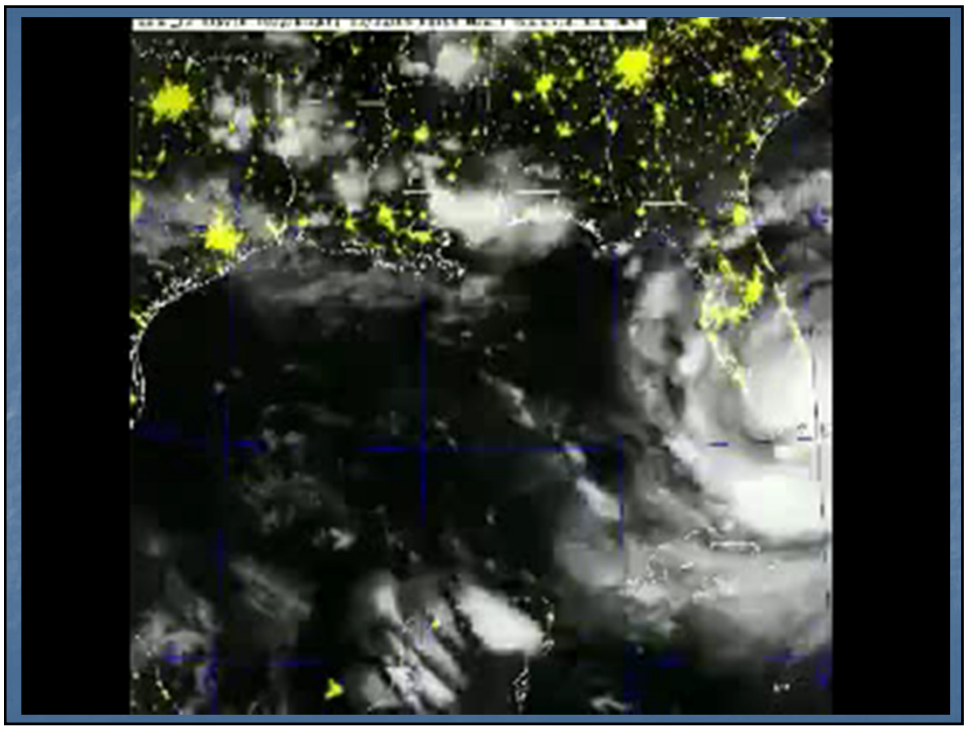
What has research shown about substance use following September 11th Terrorist Attacks? (con't)

- Vlahov et al. (2004) referencing their 2002 study that showed increases in cigarette smoking, alcohol consumption and marijuana use, this study sought to investigate the persistence of these increases.
- Among the residents of lower Manhattan, the authors found that PTSD and Major Depressions Disorders (MDD) declined by more than half over the six months after September 11, 2001.
- The increases in substance abuse did not decline substantially.
- The authors suggested that the long-term increase of substance use after disaster should be a public health concern.
- Treatment system weakness may be attributed to ill prepared staff members - ability to deal with emergency and telephone communications that often failed (NYS Office of Alcoholism and Substance Abuse Services, 2003)

What has research shown about substance use following September 11th Terrorist Attacks? (con't)

- Zywiak et al. (2003) studied the effects of trauma following September 11, 2001, on relapse rates of a group of clients following alcohol detoxification. Findings suggest that the terrorist events of 9/11 may have led to greater levels of relapse for those in alcohol recovery.


Hurricanes Katrina (August, 2005),
and Rita (September, 2005)



Hurricane Katrina's and Rita's Impact on Substance Abuse Treatment Capacity

- **Louisiana:**

- Of the addiction population in treatment, 88% were unaccounted for;
- All seven Opioid Treatment Programs in the New Orleans area were closed or destroyed;
- Nineteen outpatient treatment programs and 25 prevention programs were destroyed;
- Overall, one third of the treatment capacity was destroyed.

- **Mississippi:**

- Loss of professional staff;
- The State experienced a large influx of evacuees needing methadone maintenance therapy;
- Five out of 15 mental health designated regions experienced significant damage to their treatment facilities including the substance abuse treatment infrastructure;
- One region lost all of its treatment facilities.

(The NSDUH Report, 2008)

Substance Use and Substance Use Disorder: Prevalence Rates Before and After the Hurricane Katrina

Past Month Substance Use among persons aged 18 or older: Percentages, July 2004 - June 2005 and January - December 2006

	Gulf State Disaster Area		Remainder of United States	
	July 2004 to June 2005	2006	July 2004 to June 2005	2006
Illicit Drug Use	7.5	6.2	7.7	8.2
Marijuana Use	5.1*	3.7*	6.0	6.1
Nonmedical Use of Prescription-Type Drugs	3.1	3.0	2.4*	2.8*
Binge Alcohol Use	25.1	22.7	24.6	24.6
Cigarette Use	26.9	26.0	26.4	26.7

* p<.05

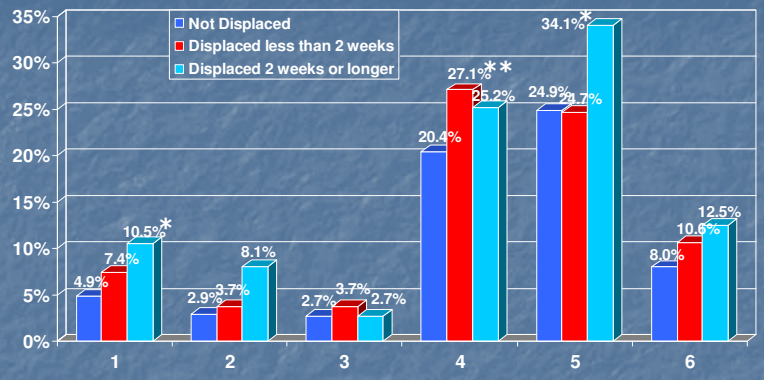
(The NSDUH Report, 2008)

Effect of Displacement on Past Month Substance Use and Past Year Substance Use Disorder

- Gulf State Disaster Area residents aged 18 or older who were displaced from their homes for *2 weeks or longer* had significantly higher rates of past month use of illicit drugs, marijuana, and cigarettes than those who were not displaced.
- Rates of marijuana use and cigarette use were significantly higher among those displaced 2 weeks or longer than those displaced less than 2 weeks.
- Adult residents of the area who were displaced from their homes for *less than 2 weeks* had significantly higher rates of past month binge alcohol use compared with residents who were not displaced.

(The NSDUH Report, 2008)

Effect of Displacement on Past Month Substance Use and Past Year Substance Use Disorder (con't)



1	Illicit Drugs	3	Nonmedical Use of Prescription-Type Drugs	5	Cigarettes
2	Marijuana	4	Binge Alcohol	6	Substance Use Disorder

* Displaced 2 weeks or longer estimate significantly higher than not displaced estimate ($p<.05$) and significantly higher than displaced less than 2 weeks estimate ($p<0.5$).

** Displaced less than 2 weeks estimate significantly higher than not displaced estimate ($p<.05$).

(The NSDUH Report, 2008)

Effect of Displacement on Past Month Substance Use and Past Year Substance Use Disorder (con't)

- Gulf State Disaster Area residents aged 18 or older who were displaced from their homes for *2 weeks or longer* had significantly higher rates of past month use of illicit drugs, marijuana, and cigarettes than those who were not displaced.
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- Adult residents of the area who were displaced from their homes for *less than 2 weeks* had significantly higher rates of past month binge alcohol use compared with residents who were not displaced.

(The NSDUH Report, 2008)

Effects of Typhoons on increases in Alcohol Use and Cigarette Smoking: A Vietnamese Study

- Contrary to the majority of US studies, none of the disaster related factors (e.g., PTSD, major depressive disorder, panic disorder) were significant in producing increases in drinking and smoking.
- Perhaps, only psychologically distressed (i.e., PTSD and panic disorder) individuals were vulnerable to increases in drinking and smoking post disaster.
- Social supports may serve as buffers against increased drinking and smoking .

(Ritter et al, 2011)

Israel: Exposure to Terrorism and Youths' Cigarette, Alcohol, and Cannabis Use

- Close physical exposure to act of terrorism predicted higher levels of alcohol and cannabis use among youths (Schiff et al., 2007).
- The youth in Jerusalem reported high exposure to terrorist acts. This exposure was associated with high PTS, depressive symptoms and alcohol use (Schiff, 2005).
- Adolescents exposed to continuous threat of terrorist attacks reported high levels of risk-taking behaviors (e.g. fighting, smoking cigarettes, drinking alcohol, using drugs, driving dangerously, breaking the law, etc.). The severity of risk-taking was associated with greater terrorism exposure (Pat-Horenczyk et al., 2007).

Gaza and Tramadol

- Drug abuse has increased dramatically in Gaza (1.5 million inhabitants) since June 2007.
- Tramadol is one of the most popular drugs being used. It relieves symptoms related to stress, as well as depression and nervousness. Tramadol is a strong painkiller that requires a prescription. It's an addictive opioid painkiller, and in a short time a user will face withdrawal symptoms.
- Tramadol's sales have tripled over the past year and a half. It's the biggest seller, even among young teenagers. "We're all living in a hard psychological situation and we used Tramadol to forget our daily worries and problems."
- Other anti-anxiety medications like Prozac, are available without prescription and are equally popular.

(IRIN news, 2009; Guardian, 2010)

Summary: What are the rates of substance use following disasters?

- Virtually no cases of new onset drug abuse emerged in any of the studies.
- Individuals in select groups who had significant problems with alcohol before a disaster are likely to have problems with alcohol use after a disaster.
- Efforts to identify alcohol problems after disasters should focus on those with preexisting conditions (North, et al., 2010).

(SAMHSA, 2005).

Summary (con't): Mechanism of Increased Substance Use Post Disaster

- Unlike rates of most other diagnoses and problems, rates of alcohol abuse or dependence appear to be no higher in survivors of mass violence than in survivors of natural disasters.
- Some people in general population increase substance use to cope with stress.
- Some people near the border of substance abuse or dependence cross the line.
- Some people in active addiction increase their use.
- Some people in recovery experience relapse.
- Some people experiencing PTSD or depressive symptoms increase use.
- Some people in other at-risk groups, such as first responders, increase their use.

(McKernan, 2006)

Conclusion

Substance abuse and dependence after a disaster is much more complex than initially thought. We can see from the research that:

- Disaster-related stress and trauma may increase the likelihood of substance use disorders.
- Prior history of substance abuse or dependence increases likelihood of substance related problems after a disaster.
- Co-occurring psychiatric disorders increase the likelihood of substance use problems.
- Increases in substance use disorders appear to endure after decreases of trauma-precipitated co-occurring mental disorders.

(Crawford, 2005)

Conclusion (con't)

- Excessive use alcohol or drugs in response to trauma is questionable.
- 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.

(Clark, 2006)

Conclusion (con't)

- Substance abuse services are low priority.
- Staff need training and attention.
- Have plans for communication backup strategies.
- Learn about dual diagnosis of PTSD and substance use/abuse.
- Train to recognize and refer

(Owens, 2004)

Intervention About SBIRT

An Early Intervention Approach

- The SBIRT Initiative represents a paradigm shift in the provision of treatment for substance use and abuse. The services are different from, but designed to work in concert with, specialized or traditional treatment.

New Target Population

- The primary focus of specialized treatment has been persons with more severe substance use or those who have met the criteria for a Substance Use Disorder. The SBIRT Initiative targets those with nondependent substance use and provides effective strategies for intervention prior to the need for more extensive or specialized treatment.

(Babor et al., 2007)

System for Assessment, Intervention, and Treatment

The initiative involves implementation of a system within community and/or medical settings—including physician offices, hospitals, educational institutions, and mental health centers—that screens for and identifies individuals with or at-risk for substance use-related problems.

Screening determines the severity of substance use and identifies the appropriate level of intervention.

Approach is Successful

Data suggest the approach is successful in modifying the consumption/use patterns of those who consume five or more alcoholic beverages in one sitting and those who use illegal substances.

These grantees have implemented SBIRT in trauma centers/emergency rooms, community clinics, federally qualified health centers, and school clinics.

SBIRT Core Components

The theoretical framework and programmatic structure of SBIRT programs may vary, but the core components of SBIRT remain and can be defined as follows:

Screening

Incorporated into the normal routine in medical and other community setting, screening provides identification of individuals with problems related to alcohol and/or substance use. Screening can be through interview and self-report. Three of the most widely used screening instruments are AUDIT, ASSIST, and DAST.

Brief Intervention

Following a screening result indicating moderate risk, brief intervention is provided. This involves motivational discussion focused on raising individuals' awareness of their substance use and its consequences, and motivating them toward behavioral change. Successful brief intervention encompasses support of the client's empowerment to make behavioral change.

Brief Treatment

Following a screening result of moderate to high risk, brief treatment is provided. Much like brief intervention, this involves motivational discussion and client empowerment. Brief Treatment, however, is more comprehensive and includes assessment, education, problem solving, coping mechanisms, and building a supportive social environment.

Referral to Treatment

Following a screening result of severe or dependence, a referral to treatment is provided. This is a proactive process that facilitates access to care for those individuals requiring more extensive treatment of the SBIRT initiative as it ensures access to the appropriate level of care for all who are screened.

Opportunities for Further Education & Research

- Cross-national & cross cultural studies of substance use/abuse in stressful conditions.
- Substance abuse in stressful conditions research examining gender, age, and country of origin differences.
- Faculty, student and agency personnel exchanges to promote education and research of substance use/abuse and disastrous conditions of common concern.
- Examination of how disasters influence the organization and provision of drug prevention and treatment policy, programs and services.

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