ETIOLOGY AND EPIDEMIOLOGY
OF ADDICTION
REVISED 2015
Etiology and Epidemiology of Addiction

Why are some people addicted to substances and others are not? What exactly is addiction, and just how bad is this problem in the US?
ETIOLOGY AND EPIDEMIOLOGY OF ADDICTION
Etiology and Epidemiology of Addiction

Course Objectives

1. Participants will be able to state the definitions of addiction, etiology and epidemiology.
2. Participants will be able to state no fewer than three facts about alcohol, nicotine, cocaine, opioids and cannabis.
3. Participants will be able to state three facts about the prevalence of addiction.
4. Participants will be able to identify no fewer than three Recovery approaches.
Etiology and Epidemiology of Addiction
History of Alcohol

Cavemen to Columbus

1. Beer was probably a staple before bread
2. The world’s oldest known recipe is for beer
3. Alcohol beverages have been produced for at least 12,000 years
4. Early Egyptian writings urged mothers to send their children to school with plenty of bread and beer for their lunch
5. A Chinese imperial edit of about 1,116 B.C. asserted that the use of alcohol in moderation was required to get into heaven
History of Alcohol

Puritans to Prohibition

1. The Puritans loaded more beer than water onto the Mayflower before they cast off for the new world.

2. While there wasn’t any cranberry sauce, mashed potatoes, sweet potatoes, or pumpkin pie to eat at the first Thanksgiving, there was beer, brandy, gin, and wine to drink.

3. A brewery was one of Harvard College’s first construction projects so that a steady supply of beer could be served in the student dining halls.

4. A traveler through the Delaware Valley in 1753 compiled a list of the drinks he encountered; all but three of the 48 contained alcohol.

5. Abraham Lincoln held a liquor license and operated several taverns.
History of Alcohol

Prohibition: The Noble Experiment

1. Convinced that alcohol was the cause of virtually all crime that on the eve of prohibition, some towns actually sold their jails.

2. During the 1800’s, temperance societies offered two pledge options: moderation in drinking or total abstinence. After those pledged total abstinence began writing “T.A.” on their pledge cards, they became known as “teetotalers”.

3. Early temperance writers often insisted that because of their high blood alcohol content, “habitual drunkards” could spontaneously combust and burn to death from the inside.

4. During Prohibition, temperance activists hired a scholar to rewrite the Bible by removing all references to alcohol beverages.
History of Alcohol

- Fermented grain, fruit juice, potatoes and honey have been used to make alcohol (ethyl alcohol or ethanol) for thousands of years.

- Fermented beverages existed in early Egyptian civilization, and there is evidence of an early alcoholic drink in China around 7000 B.C. In India, an alcoholic beverage called sura, distilled from rice, was in use between 3000 and 2000 B.C.

- The Babylonians worshiped a wine goddess as early as 2700 B.C. In Greece, one of the first alcoholic beverages to gain popularity was mead, a fermented drink made from honey and water. Greek literature is full of warnings against excessive drinking.
History of Alcohol

- Several Native American civilizations developed alcoholic beverages in pre-Columbian times. A variety of fermented beverages from the Andes region of South America were created from corn, grapes or apples, called “chicha.”

- In the sixteenth century, alcohol (called “spirits”) was used largely for medicinal purposes. At the beginning of the eighteenth century, the British parliament passed a law encouraging the use of grain for distilling spirits. Cheap spirits flooded the market and reached a peak in the mid-eighteenth century. In Britain, gin consumption reached 18 million gallons and alcoholism became widespread.
History of Alcohol

- The nineteenth century brought a change in attitudes and the temperance movement began promoting the moderate use of alcohol—which ultimately became a push for total prohibition.
- There was debate over whether alcohol was the result or cause of poverty.
- Majority called alcohol the cause of poverty.
- Between 1870-1915 half to two-thirds of U.S. Budget came from the liquor tax.
History of Alcohol

- 1920 Eighteenth Amendment was passed making manufacture and sale of any beverage with greater than 0.5% illegal
- Prohibition was called “the noble experiment”
- Other countries such as Iceland, Russia, India, Finland and parts of Canada also implemented “the noble experiment”
History of Alcohol

- Decrease in cirrhosis and other alcohol related diseases
- Domestic Violence declined
- Violent crime dropped by 2/3
- Public drunkenness almost disappeared
History of Alcohol

- The illegal alcohol trade boomed and by 1933, the prohibition of alcohol was cancelled.
- Alcoholism subsequently increased.
- 1934 AA was founded by Bill Wilson and Dr. Bob Smith.
- National Council on Alcoholism was founded in 1944 by first female member of AA, Marty Mann.
- 1971, the Hughes Act....what contribution did this act make with regard to our profession as addiction specialists?
History of Alcohol

- The National Council advocated that alcoholism be considered a disease not a moral weakness.
- Today, an estimated 15 million Americans suffer from alcoholism and 40% of all car accident deaths in the US involve alcohol.
10 Facts about Cocaine

- The Incas and Spanish conquistadors used coca leaves for currency. Spaniards wanted to ban coca leaves as ‘an evil agent of the devil’ but decided against it when the Incas began to show a decrease in productivity in the fields and gold mines. The Incas were ‘paid’ in coca leaves, and literally ate their money!
10 Facts about Cocaine

- Cocaine was invented in 1860 by a graduate student studying for his doctorate degree in Germany.
- Ophthalmologist Carl Koller discovered the anesthetic effects of cocaine and Freud later asked him to see if it could be used as a possible cure for morphine addiction.
10 Facts about Cocaine

- Pope Leo XIII publicly endorsed a coca-based drink. In 1863 a French chemist, Angelo Mariani, combined red wine and cocaine call ‘Vin Mariani’. Advertised as a drink that prevents malaria, influenza and wasting diseases. The Pope was so fond of the drink that he always carried a flask of it and even appeared on an advertising poster.
10 Facts about Cocaine

- At one point in the 1800’s, Cocaine cost 25 cents a gram....equal to about $7 in today’s money.
10 Facts about Cocaine

- Freud was only one of many coke-heads. Freud published ‘Uber Coca’ in 1884, extolling its virtues. Among others who enjoyed its benefits: Robert Louis Stevenson who is reported to have written Dr. Jekyll and Mr. Hyde during a 6-day coke binge. William Halsted, the man responsible for the use of rubber gloves during surgery also has a ‘nose’ for cocaine. Others include Thomas Edison, Jules Verne, H.G. Wells.
10 Facts about Cocaine

- Coca-Cola once contained cocaine. In 1884, morphine addicted physician John Pemberton began making his own version of Vin Mariani. With prohibition came the need to discontinue using wine and Coca Cola was born. The psychoactive ingredient was removed in 1903, but coca is still used in its production.
10 Facts about Cocaine

- Cocaine was criminalized in large part due to racist reasons. In 1899, black Americans were able to buy Coca-Cola. Southern newspapers began to report on ‘Negro Cocaine Fiends’ raping white women. 1914, NY Times had an article entitled ‘Negro Cocaine Fiends are a New Southern Menace’. That same year Dr. Edward Williams wrote in the Medical Standard: “The negro who has become a cocaine-doper is a constant menace to his community.’ This led to the 1914 Harrison Narcotics Act which limited cocaine use to medicinal and scientific purposes.
10 Facts about Cocaine

- Cocaine use peaked in 1982. After the Harrison Narcotics Act, coke consumption declined until the 70’s when it began to gain popularity as a ‘non-addictive’ recreational drug. By ‘82 there were 10.4 million annual users. A decrease in cocaine use began in 1998 with a reported percentage of 3.8 million annual users. By ‘07 it continued to decline to 2.1 m and by ‘12 it was down to 1.7m.
10 Facts about Cocaine

- The origin of ‘crack cocaine’ is impossible to trace. Arguments exist for it having been initiated on both coasts, and there is no evidence to indicate any one individual as the inventor.
10 Facts about Cocaine

- Drug policy today is still racist when it comes to crack and cocaine. This should not be surprising to anyone.
Facts about Opioids

- In the mid to late 1800’s opium was a fairly popular drug. Opium dens were scattered about the wild west due in large part to an influx of Chinese immigrants who came to work on the railroads. Wild Bill Hickock and Kit Karson were among many who frequented the dens.
Facts about Opioids

- Opium was promoted as a cure for an even greater evil in the 1800’s: Alcoholism.
- In 1810, morphine was developed as a pain reliever and considered a wonder-drug because it eliminated severe pain associated with surgery.
- The name ‘morphine’ is a derivative of the Greek God’s name: Morpheus. He was the god of dreams.
Facts about Opioids

- Tens of thousands of Confederate and Union soldiers during the Civil War became morphine addicts.
- By 1874, the answer to the morphine problem was thought to have been found in the invention of a new drug in Germany. This new drug was called....are you ready for this?....any guesses?
Facts about Opioids

Heroin
Facts about Opioids

- From the late 1800’s to the early 1900’s the pharmaceutical companies of the day were manufacturing over-the-counter drug kits. They included a glass barreled hypodermic needle and vials of opiates (morphine or heroin) and cocaine packaged in attractive tin cases. These were marketed as a cure-all for all types of physical and mental ailments ranging from alcohol withdrawal to cancer.
Facts about Opioids

- Heroin and other opioids were sold unregulated in the US until 1920 when Congress enacted the Dangerous Drug Act. By 1925 there were an estimated 200,000 heroin addicts in the US.
Facts about Opioids

- Archeological evidence and fossilized poppy sees suggest that Neanderthal man (and woman) may have used the opium poppy over 30,000 years ago.
- The first known written reference to the poppy appears in a Sumerian text dated around 4,000 BC when it was known as Hul Gil (plant of joy).
Facts about Nicotine

- Pre-Columbian Americans cultivated the plant and smoked it in pipes for medicinal and ceremonial purposes.
- Columbus brought a few tobacco leaves and seeds back with him to Europe.
- Nicotine was popularized in Europe in the mid-16th century when it was used by diplomats and adventurers like Jean Nicot of France: nicotine got its name from him.
Facts about Nicotine

- The first successful commercial crop was cultivated in Virginia in 1612 by Englishman John Rolfe. Within 7 years, it became the primary export.
- Though cigarettes existed since the 1600’s, it wasn’t popular until after the Civil War.
Facts about Nicotine

- It wasn’t until the 1930’s that the negative health effects of smoking and nicotine use were known.
- A statistical correlation between smoking and cancer was demonstrated, but no causal relationship had been shown until 1952.
- 1965, Surgeon General warnings on all packets began.
- 1971, tv advertisements were banned.
- 1990, smoking banned on all domestic flights.
Facts about Cannabinoids

- More than 45% of American adults report that they have used marijuana.
- Marijuana has been consumed for at least 5,000 years and has a long history of traditional uses throughout Asia, Africa, Europe and the Americas.
- The marijuana plant contains more than 70 compounds, called cannabinoids, in its leaves and flowers.
Facts about Cannabinoids

- The most commonly known cannabinoid is tetrahydrocannabinol (THC) which is psychoactive.
- There are numerous other non-psychoactive cannabinoids in the plant.
- The price tag of marijuana prohibition is estimated at $20B/year.
- About 46% to 58% of Americans today believe that marijuana should be legally regulated.
Facts about Cannabinoids

- 80% of Americans support the use of medical marijuana.
- Marijuana has been shown to alleviate symptoms of a wide range of illnesses including:
  - Cancer, HIV/AIDS, MS, Alzheimer’s
  - PTSD, epilepsy, Crohn’s Disease, glaucoma
  - Often effective alternative to narcotic painkillers.
- 23 states have approved medical use. 16 states have decriminalized its use and in 2012 both Colorado and Washington became the first states to legally regulate.
- Long recognized as a gateway drug, evidence suggests that marijuana can also function as an ‘exit’ drug.
Facts about Cannabinoids

- 1.1% of marijuana users 12 yrs+ in 2011 went to treatment for it. 45% of them met the criteria for dependence.

- The ancient Taiwanese were using hemp fibers to decorate pottery about 10,000 years ago, according to "The Archaeology of Ancient China" (Yale University Press, 1968).

- Smoking up could be a very different experience for men and women, according to a 2014 study in the journal Drug and Alcohol Dependence.

- There are certain places where a haze of pot smoke is to be expected: Grateful Dead concerts, for example, or marijuana legalization rallies. But on the streets of Rome? Yes, according to a 2012 study done in Italy, trace amounts of marijuana are wafting through the air around the Colosseum and the Pantheon, as well as in seven other Italian cities.
Etiology and Epidemiology of Addiction

Definitions

- **Etiology**: the science dealing with the causes of diseases.
- **Epidemiology**: the science concerned with the study of the factors determining and influencing the frequency and distribution of disease, injury and other health-related events and their causes.
Etiology and Epidemiology of Addiction

Definitions, cont.

- **Addiction:**
  - Physiological and/or psychological dependence on some agent with a tendency to increase its use.
  - A state of periodic or chronic intoxication produced by the repeated consumption of a drug characterized by an overwhelming desire or need to continue use of the drug and to obtain it by any means; a tendency to increase dosage; a psychological and/or physical dependence on its effects; a detrimental effect on the individual and on society.
Three basic components:
  - Obsessive-compulsive behavior
  - Inability to stop use
  - Continued use despite consequences
Addiction affects all areas of a person’s life:

- Biopsychosocial
- Familial
- Occupational
- Spiritual
Definitions, cont.

Although the initial use of drugs and alcohol is a voluntary act, addiction, by definition is loss of control over drug and alcohol use. The sole focus of a life revolves around acquiring and using drugs once addiction takes over. Addiction is continued compulsive use of drugs and/or alcohol in spite of repeated negative consequences associated with their use (consequences in health, family, employment and relationships).
Addiction is a chronic disease with behavioral components that requires lifelong management and periodic professional services. If untreated, it can be fatal. It affects the functions of the brain in fundamental, sometimes long-lasting ways that can persist after discontinuation of drug use.
It is known as a disease of the brain because repeated exposure to drugs disrupts the interaction of critical brain structures that control behavior. Continued substance abuse leads to tolerance or the need for higher drug dosages to produce the same effect. This can also lead to addiction, which drives a person to seek out and take drugs compulsively in spite of negative consequences related to the use. Drug addiction destroys one’s self-control and results in an inability to make sound decisions.
Why one person becomes addicted and another person does not is due to a combination of factors that involve both genetic predisposition and environment. Scientists estimate that genetic factors account for between 40 and 60 percent of a person's vulnerability to addiction.
Adolescents and individuals with mental disorders are at greater risk of drug abuse and addiction than the general population. The earlier the age of onset of drug and alcohol use, the more likely the development of addiction in the course of one’s lifetime. This is why delaying the onset of use is a primary goal of prevention.
Addiction

Theories of Addiction

- Historically addiction was looked at as a moral failure
- Poison and Pharmacy Act of 1868 required pharmacists to label opium based products as “poison”. During this period, addiction was viewed as a working class issue where worker productivity was emphasized
- 1920’s Prohibition called the “noble experiment” reaffirmed the moral failure
Addiction

Over the past 50 years, the following has contributed to a more objective approach towards Addiction:

- Biological research (aided by brain imaging techniques)
- Epidemiological studies
- Examining genetic, environmental and drug use histories
Addiction

There are four main theories of addiction:

1. Addictive Disease Model
2. Behavioral/Environmental Model
3. Academic Model
4. Diathesis-Stress Theory: Hereditary, Environment, Psychoactive Drugs & Compulsive Behaviors
Addiction

Addictive Disease Model (aka Medical Model)

- Addiction is a chronic, progressive, relapsing, incurable and potentially fatal condition
- Consequence of genetic irregularities in brain chemistry and anatomy that get activated by drugs that are abused
Addiction

**Addictive Disease Model** (aka Medical Model)

- This model maintains that addiction is set into motion by experimenting with the drug by a susceptible person in an environment that is conducive to drug use.
- Susceptible person quickly experiences compulsion to use, loss of control, and determination to use despite negative consequences.
Addiction

Addictive Disease Model (aka Medical Model)
Addiction (dependence) is characterized by:
1. Compulsive use or intoxication throughout the day
2. Loss of control over use of drug
3. Continuation of abuse despite serious physical, mental, or social disorders
4. Progressive escalation of intake and problems
5. Incurable – remission is the object of treatment not cure
6. Pathological reaction to initial drug use, such as increased tolerance, blackouts (no memory) or brownouts (vague memory)
Addiction

Behavioral/Environmental Model
This theory states that environmental and developmental influences are the leading cause of a user to progress into addictive behavior.

Animal and human studies reveal that environmental factors can change brain chemistry (ie brain handout).
Addiction

Behavioral/Environmental Model

- “environmentally induced emotional memories have a lifelong influence on people” (LeDoux, 1996; McGaugh, 2003)
- “many studies supported by scans that show brain function, suggest that physical/emotional stress resulting from abuse, anger, peer pressure, and other environmental factors causes people to seek, use, and sustain their continued dependence on drugs” (Griffiths, Bigelow & Liebson, 1978; Schroeder, Holahan, Landry, et al., 2000)
Addiction

Behavioral/Environmental Model

- “For example, chronic stress can decrease brain levels of met-enkephalin (neurotransmitter) in mice, making normal alcohol avoiding mice, more susceptible to alcohol use” (Covington & Miczek, 2005).

- This model delineates the six levels of drug use emphasizes the progressive nature of the disease:
  1. Abstinence
  2. Experimentation
  3. Social/recreational use
  4. Habituation
  5. Abuse
  6. Addiction
Addiction

Academic Model

- Addiction occurs when the body adapts to the toxic effects of drugs at the biochemical and cellular levels
- It was first proposed in 1941 by C.K. Himmelsbach that psychoactive drugs disrupt the natural balance of brain chemistry
Addiction

Academic Model

The principle states that given enough drugs over a period of time there will be changes in body/brain cells that will lead to addiction. There are four physiological changes characterize this process.
Addiction

Academic Model
Four physiological changes characterize this process:
1. Tolerance
2. Tissue dependence
3. Withdrawal syndrome
4. Psychological dependence
Addiction

Diathesis-Stress Theory of Addiction

- Side note: it is beneficial to integrate the various theories of addiction as a process that often encompasses a user’s life from birth to death
- Diathesis-Stress theory is typically used for psychological disorders
Addiction

Diathesis-Stress Theory of Addiction

- Diathesis is a constitutional predisposition or vulnerability to develop a given disorder under certain conditions.
- The genetic makeup may provide a diathesis within a person when the person reaches a level of stress that surpasses their threshold or coping abilities.
- The diathesis could be so potent that the person will develop the disorder even in a benign environment.
Addiction

Diathesis-Stress Theory of Addiction

“A diathesis, or predisposition to addiction, is the result of genetic and environmental influences which is then challenged by the use of psychoactive drugs or compulsive behaviors, and neurochemistry and brain functions are changed to the point that normal use or behaviors is extremely difficult” (Inaba & Cohen, 2004).
The Impact of Culture:

What IS culture:

- the beliefs, customs, arts, etc., of a particular society, group, place, or time
- a particular society that has its own beliefs, ways of life, art, etc.
- a way of thinking, behaving, or working that exists in a place or organization (such as a business)
Culture

Culture includes:

- Beliefs
- Values
- Customs
- Religion
- Social class
- Minority status experience
- Experience of persecution, oppression, discrimination, inequity, hostility
Cultural Influence

Influence:
the power to change or affect someone or something; the power to cause changes without directly forcing them to happen
Cultural Influence
(see handout 1)

- Culture influences patterns of alcohol consumption
- European countries have higher per capita drinking rates than the United States
- Most Asian countries have a lower per capita consumption rate
- These differences result from a combination of physiological, cultural, social, religious, and legal factors as well as Wet vs. Dry cultures
Cultural Influence

Wet drinking cultures:

- Integrate social drinking into every day life
- Consume more wine and beer than dry cultures – 5x the amount of wine drunk in dry cultures
- Countries: Austria, Belgium, France, Italy, Switzerland
Cultural Influence

Wet drinking cultures & drunk driving
Cultural Influence

Dry drinking cultures:
- Restrict the availability of alcohol and is taxed more heavily
- Consume more distilled spirits than wet cultures – 1.5x more
- Characterized by binge style drinking – particularly males on weekends
- Countries: Denmark, Finland, Norway, Sweden
Cultural Influence

Mixed drinking cultures:
- Combinations of both wet and dry cultures
- Patterns such as binge drinking in social situations are common
- Higher incidence of violence against women
Cultural Influence

Asia

China
- Don’t drink much
- Strong cultural pressure not to drink

Japan and South Korea
- Social pressures to drink is very strong
- Most of the men and half the women drink
- Alcoholism rate is half of the U.S. rates
Cultural Influence

Russia

- Vodka is traditionally drunk in large quantities between meals
- 500 years previously Czar Ivan the Terrible replaced sale of beer with state controlled vodka
- 1985 Mikhail Gorbachev restricted availability of alcohol
- Restricted availability led consumption of anything with alcohol in it (eg – shoe polish, insecticides)
- Restrictions on alcohol have been lifted and male lifespan has decreased by 6 years
Cultural Influence

England

- About 70% of Britons drink regularly
- Two thirds of consumption is beer
- State campaign recently encouraged individuals to limit themselves to no more than 3 drinks / day
Cultural Influence

United States

- Most drinking is done in social settings away from lunch and dinner tables
- Wide variety of culturally influenced drinking customs due to cultural diversity
- 18-25 age group is the most likely to binge drink
Etiology and Epidemiology of Addiction
Definitions, cont.
Continuum of Substance Use and Problems

- None
- light
- moderate
- Abuse
- substantial
- Problem Use
- heavy
- Dependence
- Addiction
- severe

Substance related disabilities
Problems
Etiology and Epidemiology of Addiction

- Biological factors of addiction
  - **Reinforcement:** brain-based changes in structure and function that lead to addictive behaviors
    - Positive and negative rewards
      - Positive rewards connected to dopamine system
      - Negative rewards connected to gamma-amino-butyric acid (GABA)

? Other Biological factors?
Etiology and Epidemiology of Addiction

- Biological factors, cont.
  - **Neuroadaptation**: brain-based changes in structure and function that lead to tolerance and withdrawal
    - Varies somewhat with different substances
    - Alcohol, for example, affects GABA receptors, leading to more inhibition and an overall sense of relaxation without the GABA system having to increase its work. Eventually the body compensates (adapts) to the action of the alcohol on the GABA system by the action and number of receptors.
Etiology and Epidemiology of Addiction

- Biological factors, cont.
  - Evidence exists that for many individuals it may take over a year for the body to return to normal.
  - These changes may be permanent in some people.

  - Taken from: Pills and Potions by Susan McCabe and Michele Laraia; 2002
DRUG ADDICTION IS A COMPLEX ILLNESS
Changes in Brain

Alcohol’s Effects on the Brain
Alcohol starts by affecting the frontal lobe and then working down the brain until finally it affects the brain stem

1. **Frontal Lobe** – sense of reasoning, caution, inhibitions (Happy hour – feeling good, relaxed, euphoric, less anxious and worried

2. **Parietal Lobe** – self control, judgment, impulse control – our filter that helps us determine the impulses should be acted upon (example: violent or sexual impulses more easily become actions). Steadiness, fine motor skills are impaired.

3. **Occipital Lobe** – senses and coordination – double vision starts to happen; we talk louder because we are not aware how loud we are.

4. **Cerebellum** – Balance – when this gets impaired people aren’t able to stand up or walk very well. Fine and gross motor coordination gets seriously impaired.

5. **Brain Stem** – This controls our vital centers or our involuntary functions like breathing and heart beat
Positron Emission Tomography (PET)
Etiology and Epidemiology of Addiction

Why people use drugs and alcohol

“It’s peer pressure... no, it’s poor self-concept... it’s just because it’s fun and pleasurable... it’s the hopelessness of our society... it’s due to the dishonesty and hypocrisy of our institutions... no, it’s our inability to connect with each other and establish effective relationships... it’s the parents... it’s the media that promote instant pleasure, short-term goals and alcohol use... it’s the ineffectiveness of the school system and other institutions... it’s the avoidance of pain and the hedonism of modern society... it’s the lack of caring for our fellow human beings... it’s stress, pressure, and the breakdown of the family... it’s just available... why not...”

Drugs and Alcohol in Perspective
Four correlates and antecedents of drug use:

Number 1

- Demographic factors
  - Early age of onset
  - Gender difference; heavier use among males
Etiology and Epidemiology of Addiction

“Beginning drug use before age 15 predicted an increased risk of drug disorders, particularly of a severe type. Early onset of use was also associated with more alcoholism and antisocial personality. Other diagnoses were more common if drug onset was either unusually early or unusually late.” -- Robins & Przybeck
Number 2

- **Social-environmental factors**
  - Family/peer approval
  - Family/peer role models for use
  - Incompatibility between parents and peers
  - Absence of closeness to parents
  - Weak parental controls
  - Accessibility to drugs
  - Cultural Aspects and Contributors
Number 3

- **Intrapersonal factors**
  - Greater value on independence
  - Lower value on achievement
  - Lower expectations for academic achievement
  - Greater tolerance for deviant behavior
  - Lower religiosity
  - Greater expectations of failure
Number 4

- Behavioral factors
  - Various forms of delinquency
  - Sexual activity at a young age
  - Political activism
  - Declining academic performance
Etiology and Epidemiology

- **ED**: Emergency Departments
- **DAWN**: Drug Abuse Warning Network
- **OAS**: Office of Applied Studies
- **SAMHSA**: Substance Abuse and Mental Health Services Administration
- **CEWG**: Community Epidemiology Work Group
- **MTF**: Monitoring the Future Studies
- **TED**: Treatment Episode Data
Drug Abuse Warning Network (DAWN Report) 2009

- Delaware,
- Maine,
- Maryland,
- Massachusetts,
- New Hampshire,
- New Mexico,
- Oklahoma,
- Oregon,
- Rhode Island,
- Utah,
- Vermont,
- Virginia, and
- West Virginia.
<table>
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<th>State</th>
<th>Area</th>
<th>Rate of drug-related deaths per 100,000 population</th>
<th>Rate of drug-related suicide deaths per 100,000 population</th>
<th>Population in participating jurisdictions</th>
<th>Percent of area population covered by participating ME/Cs</th>
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<td>Maine</td>
<td>Statewide</td>
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<td>2.7</td>
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<td>100%</td>
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Maine

- Drug-related deaths reported to DAWN: 153
- Drug-related suicide deaths reported to DAWN: 35
- State population, 2009: 1,318,301
- Population covered by DAWN: 1,318,301
- Percent of population covered by DAWN: 100%
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<th>State</th>
<th>Area</th>
<th>Rate of drug-related deaths per 100,000 population</th>
<th>Rate of drug-related suicide deaths per 100,000 population</th>
<th>Population in participating jurisdictions</th>
<th>Percent of area population covered by participating ME/Cs</th>
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<td>Massachusetts</td>
<td>Essex County</td>
<td>14.1</td>
<td>1.1</td>
<td>742,582</td>
<td>100%</td>
</tr>
<tr>
<td>Massachusetts</td>
<td>Middlesex County</td>
<td>11.0</td>
<td>1.1</td>
<td>1,505,006</td>
<td>100%</td>
</tr>
<tr>
<td>Massachusetts</td>
<td>Norfolk County</td>
<td>10.7</td>
<td>0.9</td>
<td>666,303</td>
<td>100%</td>
</tr>
<tr>
<td>Massachusetts</td>
<td>Plymouth County</td>
<td>12.4</td>
<td>2.0</td>
<td>498,344</td>
<td>100%</td>
</tr>
<tr>
<td>Massachusetts</td>
<td>Suffolk County</td>
<td>24.7</td>
<td>1.2</td>
<td>753,580</td>
<td>100%</td>
</tr>
<tr>
<td>Massachusetts</td>
<td>Pittsfield, MA</td>
<td>17.0</td>
<td>3.1</td>
<td>129,288</td>
<td>100%</td>
</tr>
<tr>
<td>Massachusetts</td>
<td>Springfield, MA</td>
<td>15.3</td>
<td>1.7</td>
<td>698,903</td>
<td>100%</td>
</tr>
</tbody>
</table>
Massachusetts

- Drug-related deaths reported to DAWN: 939
- Drug-related suicide deaths reported to DAWN: 87
- State population, 2009: 6,593,587
- Population covered by DAWN: 6,593,587
- Percent of population covered by DAWN: 100%
<table>
<thead>
<tr>
<th>State</th>
<th>Area</th>
<th>Rate of drug-related deaths per 100,000 population†</th>
<th>Rate of drug-related suicide deaths per 100,000 population</th>
<th>Population in participating jurisdictions</th>
<th>Percent of area population covered by participating ME/Cs</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Hampshire</td>
<td>Statewide</td>
<td>11.7</td>
<td>2.0</td>
<td>1,324,575</td>
<td>100%</td>
</tr>
<tr>
<td>New Hampshire</td>
<td>Berlin, NH-VT</td>
<td>0.0</td>
<td>0.0</td>
<td>37,881</td>
<td>100%</td>
</tr>
<tr>
<td>New Hampshire</td>
<td>Claremont, NH</td>
<td>7.0</td>
<td>0.0</td>
<td>42,692</td>
<td>100%</td>
</tr>
<tr>
<td>New Hampshire</td>
<td>Concord, NH</td>
<td>10.1</td>
<td>1.3</td>
<td>149,071</td>
<td>100%</td>
</tr>
<tr>
<td>New Hampshire</td>
<td>Keene, NH</td>
<td>10.4</td>
<td>1.3</td>
<td>77,045</td>
<td>100%</td>
</tr>
<tr>
<td>New Hampshire</td>
<td>Laconia, NH</td>
<td>11.4</td>
<td>4.9</td>
<td>61,358</td>
<td>100%</td>
</tr>
<tr>
<td>New Hampshire</td>
<td>Lebanon, NH-VT</td>
<td>14.6</td>
<td>1.7</td>
<td>171,739</td>
<td>100%</td>
</tr>
<tr>
<td>New Hampshire</td>
<td>Manchester-Nashua, NH</td>
<td>13.3</td>
<td>3.0</td>
<td>405,906</td>
<td>100%</td>
</tr>
</tbody>
</table>
New Hampshire

- Drug-related deaths reported to DAWN: 155
- Drug-related suicide deaths reported to DAWN: 27
- State population, 2009: 1,324,575
- Population covered by DAWN: 1,324,575
- Percent of population covered by DAWN: 100%
<table>
<thead>
<tr>
<th>State</th>
<th>Area*</th>
<th>Rate of drug-related deaths per 100,000 population†</th>
<th>Rate of drug-related suicide deaths per 100,000 population</th>
<th>Population in participating jurisdictions</th>
<th>Percent of area population covered by participating ME/Cs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rhode Island</td>
<td>Statewide</td>
<td>17.3</td>
<td>2.6</td>
<td>1,053,209</td>
<td>100%</td>
</tr>
<tr>
<td>Rhode Island</td>
<td>Providence-New Bedford-Fall River, RI-MA</td>
<td>17.4</td>
<td>2.1</td>
<td>1,600,642</td>
<td>100%</td>
</tr>
<tr>
<td>Rhode Island</td>
<td>Bristol County</td>
<td>17.5</td>
<td>1.1</td>
<td>547,433</td>
<td>100%</td>
</tr>
<tr>
<td>Rhode Island</td>
<td>Providence County</td>
<td>18.5</td>
<td>2.5</td>
<td>627,690</td>
<td>100%</td>
</tr>
</tbody>
</table>
Rhode Island

- Drug-related deaths reported to DAWN: 182
- Drug-related suicide deaths reported to DAWN: 27
- State population, 2009: 1,053,209
- Population covered by DAWN: 1,053,209
- Percent of population covered by DAWN: 100%
<table>
<thead>
<tr>
<th>State</th>
<th>Area</th>
<th>Rate of drug-related deaths per 100,000 population</th>
<th>Rate of drug-related suicide deaths per 100,000 population</th>
<th>Population in participating jurisdictions</th>
<th>Percent of area population covered by participating ME/Cs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vermont</td>
<td>Statewide</td>
<td>12.9</td>
<td>2.4</td>
<td>621,760</td>
<td>100%</td>
</tr>
<tr>
<td>Vermont</td>
<td>Barre, VT</td>
<td>11.9</td>
<td>1.7</td>
<td>58,696</td>
<td>100%</td>
</tr>
<tr>
<td>Vermont</td>
<td>Bennington, VT</td>
<td>13.7</td>
<td>5.5</td>
<td>36,411</td>
<td>100%</td>
</tr>
<tr>
<td>Vermont</td>
<td>Burlington-South Burlington, VT</td>
<td>14.4</td>
<td>1.9</td>
<td>208,055</td>
<td>100%</td>
</tr>
<tr>
<td>Vermont</td>
<td>Rutland, VT</td>
<td>19.0</td>
<td>1.6</td>
<td>63,014</td>
<td>100%</td>
</tr>
</tbody>
</table>
Vermont

- Drug-related deaths reported to DAWN: 80
- Drug-related suicide deaths reported to DAWN: 15
- State population, 2009: 621,760
- Population covered by DAWN: 621,760
- Percent of population covered by DAWN: 100%

<table>
<thead>
<tr>
<th></th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample of hospitals</td>
<td>556</td>
<td>562</td>
<td>544</td>
</tr>
<tr>
<td>Responding hospitals</td>
<td>220</td>
<td>224</td>
<td>205</td>
</tr>
<tr>
<td>Drug-related ED visits</td>
<td>168,841</td>
<td>268,128</td>
<td>269,339</td>
</tr>
</tbody>
</table>
Analysis Domains

- Drug-related ED visits
  - Medical use
    - Pharmaceuticals
  - Nonmedical use
    - Pharmaceuticals
    - Illicit drugs
    - Alcohol
Definition:
Nonmedical Use of Pharmaceuticals

- Based on retrospective chart review
  - Exceeded prescribed or recommended dose
  - Used drugs prescribed for another
  - Malicious poisoning
  - Substance abuse

- Excludes drug-related suicides
- Includes suicide ideation, plan, gesture
Limitations of the data

- There are limitations to be considered when reviewing counts of drug-related deaths, deaths by type of drug, rates of death, and changes in the number of deaths between years:
State laws dictate which deaths are subject to ME/C review. These laws vary by State and, within each State, by time. Within ME/C offices, toxicology testing practices vary depending on local concerns, funding, and testing technology. Such factors will affect the number of deaths determined to be DAWN cases, the number of deaths attributed to particular drugs, and the rates per 100,000 population based on those numbers.
Not every reported substance (drug) is, by itself, the cause of death or even a contributor to the death. DAWN's broad definition of drug involvement requires only that the drug is related to the death. Therefore, even in single-drug deaths, reported drugs may not be a direct cause of death. Furthermore, incidental reporting (i.e., reporting of drugs unrelated to the death) is unavoidable due to ambiguities and insufficiencies in the ME/C records.
If the number of deaths associated with an area or drug is small, a small increase in the absolute number of deaths can result in a large percentage difference. For example, in 2009, Keene, NH, experienced a more than 300 percent increase in drug-related deaths compared with 2008. There were two deaths in 2008 and eight deaths in 2009. To get a sense of the significance of a large percentage change, it is helpful to consider the absolute numbers of deaths, the population, and rates per 100,000 population.
Counts of deaths that are less than four but greater than zero are suppressed.

Even though there is no sampling error in DAWN ME/C data, there is the possibility of nonsampling errors (i.e., errors in reporting, differences in testing protocols). Efforts are made to limit nonsampling errors (i.e., checking for invalid data values, comparing death counts across years for individual ME/Cs to identify unexpected jumps or declines).
TEDS

Keyword: TEDS (Google)
Treatment Episode Data Set
By Drug: Admissions to Publicly Funded Substance Abuse Treatment Programs 2003 and 2007

<table>
<thead>
<tr>
<th>Substance or Drug</th>
<th>2003</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>alcohol</td>
<td>23.2</td>
<td>22.3</td>
</tr>
<tr>
<td>alcohol + another drug</td>
<td>18.7</td>
<td>18.0</td>
</tr>
<tr>
<td>marijuana</td>
<td>15.4</td>
<td>15.8</td>
</tr>
<tr>
<td>heroin</td>
<td>14.4</td>
<td>13.6</td>
</tr>
<tr>
<td>smoked cocaine (crack)</td>
<td>9.9</td>
<td>9.2</td>
</tr>
<tr>
<td>stimulants</td>
<td>7.7</td>
<td>7.9</td>
</tr>
<tr>
<td>non-smoked cocaine (e.g., cocaine powder)</td>
<td>3.5</td>
<td>3.7</td>
</tr>
<tr>
<td>unknown substances</td>
<td>3.1</td>
<td>3.0</td>
</tr>
<tr>
<td>opiates other than heroin</td>
<td>2.9</td>
<td>5.0</td>
</tr>
<tr>
<td>tranquilizers</td>
<td>0.4</td>
<td>0.5</td>
</tr>
<tr>
<td>PCP</td>
<td>0.2</td>
<td>0.2</td>
</tr>
<tr>
<td>sedatives</td>
<td>0.2</td>
<td>0.2</td>
</tr>
<tr>
<td>hallucinogens</td>
<td>0.1</td>
<td>0.1</td>
</tr>
<tr>
<td>inhalants</td>
<td>0.1</td>
<td>0.1</td>
</tr>
</tbody>
</table>

What might account for changes in percentages between ‘03 and ’07?
By Race: Admissions to Publicly Funded Substance Abuse Treatment Programs 2003 and 2007

Percentage of Admissions Race/Ethnicity

<table>
<thead>
<tr>
<th>Race/Ethnicity</th>
<th>2003</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>61.8</td>
<td>59</td>
</tr>
<tr>
<td>African-American</td>
<td>23.6</td>
<td>20.6</td>
</tr>
<tr>
<td>Hispanic or Latino</td>
<td>13.3</td>
<td>14.1</td>
</tr>
<tr>
<td>Other</td>
<td>10.1</td>
<td>.09</td>
</tr>
<tr>
<td>American Indian or Alaska Native</td>
<td>2.3</td>
<td>.02</td>
</tr>
<tr>
<td>Asian American, Native Hawaiian, or Other Pacific Islander</td>
<td>1.1</td>
<td>.03</td>
</tr>
<tr>
<td>Unknown</td>
<td>1.1</td>
<td>1.0</td>
</tr>
</tbody>
</table>

*What might account for changes in percentages between ‘03 and’07?*
By Age Group: Admissions to Publicly Funded Substance Abuse Treatment Programs 2003 and 2007

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Percentage of Admissions</th>
<th>Age range</th>
</tr>
</thead>
<tbody>
<tr>
<td>36 – 40</td>
<td>12.4</td>
<td>41 – 45</td>
</tr>
<tr>
<td>31 – 35</td>
<td>11</td>
<td>21 – 25</td>
</tr>
<tr>
<td>26 – 30</td>
<td>11</td>
<td>26 – 30</td>
</tr>
<tr>
<td>46 – 50</td>
<td>11.4</td>
<td>46 – 50</td>
</tr>
<tr>
<td>12 – 17</td>
<td>3</td>
<td>12 – 17</td>
</tr>
<tr>
<td>18 – 20</td>
<td>2</td>
<td>18 – 20</td>
</tr>
<tr>
<td>51 – 55</td>
<td>6</td>
<td>51 – 55</td>
</tr>
<tr>
<td>56 – 60</td>
<td>3</td>
<td>56 – 60</td>
</tr>
<tr>
<td>61 – 65</td>
<td>1</td>
<td>61 – 65</td>
</tr>
<tr>
<td>66 or older</td>
<td>0.5</td>
<td>66 or older</td>
</tr>
<tr>
<td>11 or younger</td>
<td>0.2</td>
<td>11 or younger</td>
</tr>
<tr>
<td>unknown age</td>
<td>0.2</td>
<td>unknown age</td>
</tr>
</tbody>
</table>
Characteristics of Admissions for Adult Heroin Users

- 68.7% (29,334) were male
- 31.3% female
- 69.5% (29,664) were White, 7.6% Black, 19.6% Latino, 3.4% Other racial categories
- 89.5% were unemployed
- 25.6% were homeless
- 27.9% had received prior mental health treatment
Characteristics Cont’d.

- 71.5% of admissions reported past year injection drug use (of any drugs)
- 72.5% reported injection as their usual route of heroin administration, 25% reported inhaling, 2.5% reported other routes of administration
- 33% of admissions were between ages 30-39
- 22.2% were parents of children under six, 24% of these admissions reported living with their children. 35% were parents of children 6-18 years of age, 20% reported living with their children
Primary Substance of Use

- In FY 2004, admissions who had used heroin in the past year, also reported heroin as the primary drug for which they were seeking treatment. Of all admissions:
  - 86.4% (36,900) reported heroin as primary substance of use
  - 6.1% (2,586) reported alcohol as primary
  - 3.2% (1,352) reported crack or cocaine as primary
  - 0.6% (274) reported marijuana
  - 3.7% (1,594) reported other drugs as primary substance of use
Illicit drug use concurrent with alcohol use (i.e., during or within 2 hours of last alcohol use) was reported by 5.6 percent of past month alcohol users in 2006 and 2007; this is equivalent to an estimated 7.1 million persons.
The illicit drug most frequently used with alcohol was marijuana (reported by 4.8 percent of past month alcohol users)
Among past month alcohol users, adolescents aged 12 to 17 and young adults aged 18 to 25 had higher rates of illicit drug use concurrent with last alcohol use than persons in older age groups.
Among past month alcohol users, those who binged on alcohol during their last occasion of use were more likely than their counterparts who did not binge to have used illicit drugs concurrent with their last alcohol use (13.9 vs. 3.8 percent)
State Estimates of Underage Alcohol Use
Comparative Analysis of States within Region

Highlights

- More than one quarter (30.54 percent) of persons aged 12 to 20 drank alcohol in the past month here in the Northeast.
- Past month use of alcohol among persons aged 12 to 20 (underage use of alcohol) ranged from a low of 13.6 percent in Utah to a high of 38.3 percent in Vermont.
- Of the 10 States with the highest rates of past month alcohol use in the nation, 6 were in the Northeast: Vermont, New Hampshire, Massachusetts, Connecticut, and Rhode Island.

Source: 2007 and 2008 SAMHSA National Surveys on Drug Use and Health (NSDUHs).
Etiology and Epidemiology of Addiction

- Nationwide trends identified in NIDA’s Community Epidemiology Work Group (CEWG)
  - Examines trends in 21 major US cities.
  - Assesses patterns from health and drug abuse indicator sources
    - Treatment Episode Data Set
    - Arrestee Drug Abuse Monitoring program
    - Drug seizure data
    - Uniform crime reports
Etiology and Epidemiology of Addiction

2001 Use trends

- **Cocaine/crack**: high incidents of use: stable in 10 sites, mixed in 9 sites and increased use in 2 sites. 2000 ER rates higher than those for heroin/morphine in 16 cities. Arrested adults were more likely to test positive for cocaine than opiates, marijuana and methamphetamines.
Etiology and Epidemiology of Addiction

Use trends

- **Heroin**: Use increased in 15 of the 21 cities, remained stable in 2, decreased in 4. Purity of heroin has increased in 4, including Boston and New York, and most areas east of the Mississippi.

- **Misuse of Prescription Opiates**: Increased use in 14 of 21 sites.

Heroin is arguably Boston’s most abused drug. Heroin/morphine was indicated most often among drug abuse deaths, preliminary emergency department data, and treatment admissions. After years of continued growth, some indicators show heroin abuse stabilizing at very high levels.
Etiology and Epidemiology of Addiction

Use trends

- Marijuana: Use increased in 12 sites, remained stable or mixed in 8, and decreased in 1 (Atlanta). ER mentions, arrests and treatment admissions have been increasing. Percentage of males testing positive for marijuana at time of arrest were higher than those testing cocaine positive in 13 sites.

- The marijuana admission rate for the United States as a whole increased from 81 per 100,000 persons aged 12 or older in 1995 to over 118 per 100,000 in 2005. Rates increased in 36 of the 44 States reporting in both years, and declined in 8 States. Three of the 10 States with the highest rates of admission in 1995 (i.e., those States with at least 130 admissions per 100,000) increased their rates at least 20 percent (Iowa, Montana, and Maryland) (Table 2).

Although admission rates for marijuana were generally higher in 2005 than in 1995, the geographic pattern was similar in 1995 and 2005 (Figure 2). Marijuana treatment admission rates were generally highest in the West North Central and Pacific States.
Etiology and Epidemiology of Addiction

Use trends

- **Methamphetamine**: Use indicators increased in 6 of the 7 sites that normally have high incidence rates. San Francisco was the only site to report decrease in use. Purity levels were close to 100% in Honolulu and Phoenix.

- The methamphetamine/amphetamine treatment admission rate for the United States as a whole increased between 1995 and 2005, from 30 per 100,000 persons aged 12 or older to 68 per 100,000. Admission rates increased in 43 of the 44 States reporting in both years. Four of the 10 States with the highest rates of admission in 1995 (i.e., those States with admission rates greater than 50 per 100,000) more than doubled their rate of admission in 2005 (Hawaii, Washington, Montana, and Arkansas) (Table 1).

In 1995 and 2005, methamphetamine/amphetamine admission rates were generally highest in the Pacific and Mountain States (Figure 1). In 1995, one State had a methamphetamine/amphetamine admission rate equal to or greater than 220 per 100,000 persons aged 12 or older; by 2005, four States had rates that high or higher. States east of the Mississippi River generally exhibited higher rates of admissions in 2005 than in 1995.
Etiology and Epidemiology of Addiction

Use trends

- **MDMA**: Increased use in 19 sites, stable in 2. ER mentions increased significantly in 14 sites. Most of the pills are produced abroad in Netherlands and Belgium. Some labs have sprouted up in Minneapolis, San Diego, and areas of Michigan and South Florida.
Etiology and Epidemiology of Addiction

Use trends

- **PCP**: No widespread use in 2000, but evidence that it is on the increase in some sites. ER rates increased in 8 sites. 50 PCP-related deaths in Los Angeles, 22 in Philadelphia.
Etiology and Epidemiology of Addiction

- 22 million (7.6%) Americans aged 12 or older are addicted to alcohol or other drugs. (2002,3)
  - RI has the highest rate of alcoholism in the nation for persons aged 18+ (10.7%)
- 3% Americans are dependent or abuse illicit substances
  - RI has the highest rate (12.7%)
Etiology and Epidemiology of Addiction

- National rate in 2002, 2003 for dependence or abuse of alcohol or other drugs among persons 12+ = 9.2%
  - RI has the highest rate (29.4%)
Etiology and Epidemiology of Addiction

- Illicit use in the past month of any drug:
  - Colorado, NH and VT had the highest percentages in the 12 + yr old group

  Marijuana:
  - Age 12-17: MA, NH, VT in top fifth percentile

- Cocaine:
  - RI had the highest rate of users in the 18 – 25yo range (12.1%)
Assignment IF access to web

- TEDS, CEWG, DAWN and MTF
- 4 groups; latest statistics of opioid use in NE.
Etiology and Epidemiology of Addiction

Treatment Approaches

- Moral Model
- Disease Model
- Psychodynamic Model
- Harm Reduction Model
Etiology and Epidemiology of Addiction

Theoretical Approaches

- Spiritual wellness
- Psychological wellness
- Abstinence based
- Harm reduction based
- Medication Assisted Recoveries
- CBT
- Motivational Enhancement
Prevention Programs Should . . . . Reduce Risk Factors

- ineffective parenting
- chaotic home environment
- lack of mutual attachments/nurturing
- inappropriate behavior in the classroom
- failure in school performance
- poor social coping skills
- affiliations with deviant peers
- perceptions of approval of drug-using behaviors in the school, peer, and community environments
Prevention Programs Should . . .

Enhance Protective Factors

- strong family bonds
- parental monitoring
- parental involvement
- success in school performance
- prosocial institutions (e.g. such as family, school, and religious organizations)
- conventional norms about drug use

[www.drugabuse.gov](http://www.drugabuse.gov)
Prevention Programs Should . . .

Target all Forms of Drug Use

. . . and be Culturally Sensitive

www.drugabuse.gov
Prevention Programs Should . . . .

Include Interactive Skills-Based Training

- Resist drugs
- Strengthen personal commitments against drug use
- Increase social competency
- Reinforce attitudes against drug use
Prevention Programs Should be...  

Family-Focused

- Provides greater impact than parent-only or child-only programs
- Include at each stage of development
- Involve effective parenting skills
Prevention Programs Should . . . .

Involve Communities and Schools

- Media campaigns and policy changes
- Strengthen norms against drug use
- Address specific nature of local drug problem
Components of Comprehensive Drug Addiction Treatment

- Family Services
- Housing / Transportation Services
- Financial Services
- Legal Services
- AIDS/HIV Services
- MENTAL HEALTH SERVICES
- MEDICAL SERVICES
- EDUCATIONAL SERVICES
- VOCATIONAL SERVICES

- CHILD CARE SERVICES
- Behavioral Therapy and Counseling
- Clinical and Case Management
- Pharmacotherapy
- Continuing Care
- Treatment Plan
- Intake Processing/Assessment
- Substance Use Monitoring
- Self-Help/Peer Support Groups

www.drugabuse.gov
Matching Patients to Individual Needs

- No single treatment is appropriate for all individuals.
- Effective treatment attends to multiple needs of the individual, not just his/her drug use.
- Treatment must address medical, psychological, social, vocational, and legal problems.
Duration of Treatment

- Depends on patient problems/needs
- Less than 90 days is of limited/no effectiveness for residential/outpatient setting
- A minimum of 12 months is required for methadone maintenance
- Longer treatment is often indicated
Medical Detoxification

- Detoxification safely manages the physical symptoms of withdrawal
- Only first stage of addiction treatment
- Alone, does little to change long-term drug use
Counseling and Other Behavioral Therapies

- Drug Resistance Skills
- Problem Solving Skills
- Interpersonal Relationships
- Motivation
- Replace Drug Using Activities
Medications for Drug Addiction

- Buprenorphine
- Methadone
- LAAM
- Naltrexone
- Nicotine Replacement
  - patches
  - gum
  - bupropion
Motivation to Enter/ Sustain Treatment

• Effective treatment need not be voluntary
• Sanctions/enticements (family, employer, criminal justice system) can increase treatment entry/retention
• Treatment outcomes are similar for those who enter treatment under legal pressure vs voluntary
HIV/AIDS, Hepatitis and Other Infectious Diseases

- Drug treatment is disease prevention
- Drug treatment reduces likelihood of HIV infection by 6 fold in injecting drug users
- Drug treatment presents opportunities for screening, counseling, and referral
Effectiveness of Treatment

- Goal of treatment is to return to productive functioning
- Treatment reduced drug use by 40-60%
- Treatment reduces crime by 40-60%
- Treatment increases employment prospects by 40%
- Drug treatment is as successful as treatment of diabetes, asthma, and hypertension
Self-Help and Drug Addiction Treatment

- Complements and extends treatment efforts
- Most commonly used models include 12-Step (AA, NA) and Smart Recovery
- Most treatment programs encourage self-help participation during/after treatment
Cost-Effectiveness of Drug Treatment

- Treatment is less expensive than not treating or incarceration (1 yr methadone maintenance = $4,700 vs. $18,400 for imprisonment)
- Every $1 invested in treatment yields up to $7 in reduced crime-related costs
- Savings can exceed costs by 12:1 when health care costs are included
- Reduced interpersonal conflicts
- Improved workplace productivity
- Fewer drug-related accidents
Etiology and Epidemiology of Addiction

Bibliography

Etiology and Epidemiology of Addiction

Sources of Drug Abuse Information

- NIDA Infofax. 1.800.644.6432
  - www.drugabuse.gov
- National Drug and Alcohol Treatment Referral System. 1.800.662.4357
- National Clearinghouse for Alcohol and Drug Information (NCADI). 1.800.729.6686
  - www.health.org
- Wally Bear Hotline (for children) 1.800.449.2559
- National Technical Information Service (NTIS) 1.800.553.6847
  - www.ntis.gov
- Drug Policy Information Clearinghouse. 1.800.666.3332
  - www.ncjrs.org
- Workplace Helpline. 1.800.WORKPLACE
  - helpline@samhsa.gov