Marijuana

Module 4
Whatever you call it, marijuana is the nation's most commonly used illicit drug.
MARIJUANA...The nations most commonly used illicit drug

22.2 million users in the past month according to the 2014 National Survey on Drug Use and Health (NSDUH).
According to a 2015 National Survey on Drug Use and Health:

<table>
<thead>
<tr>
<th>Age Range</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Ages 12 or older</td>
<td>44%</td>
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<tr>
<td>Ages 12 - 17</td>
<td>15.7%</td>
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<tr>
<td>Ages 18 - 25</td>
<td>52.7%</td>
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<tr>
<td>Ages 26 or older</td>
<td>46%</td>
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</table>

Have tried Marijuana at least once in their lifetime.
Long-Term Trends in Annual* Marijuana Use Among 8th-, 10th-, and 12th-Graders

*use in the past 12 months

Source: University of Michigan, 2015 Monitoring the Future Survey.
Medical emergencies, when marijuana use was reported, have also increased. The Drug Abuse Warning Network (DAWN), a system for monitoring the health impact of drugs, estimated that in 2011, there were nearly 456,000 drug-related emergency department visits in the United States in which marijuana use was mentioned in the medical record (a 21 percent increase over 2009). About two-thirds of patients were male and 13 percent were between the ages of 12 and 17.
When Marijuana is smoked, its active ingredient, THC, travels throughout the body, including the brain, to produce its many effects. THC attaches to sites called Cannabinoid Receptors on nerve cells in the brain, affecting the way those cells work.

Cannabinoid receptors are abundant in parts of the brain that regulate movement, coordination, learning, and memory, higher cognitive functions such as judgement and pleasure.
What is MARIJUANA?

MJ is a greenish-gray mixture of dried and shredded leaves, stems, seeds and flowers of cannabis sativa.

The major active chemical in MARIJUANA is Delta-9 Tetra Hydro Cannabinol (T.H.C.)
The amount of T.H.C. determines the potency and therefore the effects of marijuana.

T.H.C. * Causes mind-altering effects of marijuana intoxication.
Potent Preparations:

Hashish - pure resin removed from the surface of leaves and stems (7-14% T.H.C.)

Ganja - from the tops of plants with pistillate flowers - female plants (7-8% T.H.C.)

Sinsemilla - hybrid plant - without seeds (10-11% T.H.C.)
When Marijuana is smoked:

- THC and other chemicals in the plant pass from the lungs into the bloodstream, which rapidly carries them throughout the body and to the brain. The user begins to experience their effects almost immediately.

- Effects may vary dramatically among different users, include heightened sensory perception (e.g., brighter colors), laughter, altered perception of time, and increased appetite.
When Marijuana is Consumed:

If marijuana is consumed in foods or beverages, these effects are somewhat delayed—usually appearing after 30 minutes to 1 hour—because the drug must first pass through the digestive system.

Eating or drinking marijuana delivers significantly less THC into the bloodstream than smoking an equivalent amount of the plant. Because of the delayed effects, users may inadvertently consume more THC than they intend to.
Other effects of Marijuana use:

Pleasant experiences with marijuana are by no means universal. Instead of relaxation and euphoria, the user may experience:

- Anxiety
- Fear
- Distrust
- Panic
These effects are more common when too much is taken, the marijuana has an unexpectedly high potency, or a user is inexperienced. People who have taken large doses of marijuana may experience an acute psychosis (which includes hallucinations, delusions, and a loss of the sense of personal identity.)

These unpleasant but temporary reactions are distinct from longer-lasting psychotic disorders, such as schizophrenia, that may be associated with the use of marijuana in vulnerable individuals.

You can start to build a tolerance to marijuana. Tolerance describes an adaptation by the brain to a drug in which higher doses of the drug are required to obtain the effect of the initial dose.
Health consequences of Marijuana ACUTE (present during intoxication):

• Impaired short-term memory
• Impaired attention, judgment, and other cognitive functions
• Impaired coordination and balance
• Increased heart rate
• Anxiety, paranoia
• Psychosis (uncommon)
Health Consequences of Marijuana

- PERSISTANT (lasting longer than intoxication)
- Impaired learning and coordination
- Sleep problems
Health consequences of Marijuana LONG-TERM (potentially permanent effects)

- Can lead to addiction
- Gateway drug? (altered reward system)
- Increases risk of chronic cough, bronchitis, emphysema
- Cognitive impairment including - memory, learning, and impulse control
- Potential reduction in IQ
- Difficulty making decisions
- Potentially increased risk of anxiety, depression, and amotivational syndrome
  - Amotivational syndrome is a psychological condition associated with diminished inspiration to participate in social situations and activities, with episodes of apathy caused by an external event, situation, substance (or lack of), relationship (or lack of), or other cause.
Workers that smoke marijuana are more likely to have problems on the job:

- Increased absences
- Tardiness
- Accidents
- Workers Comp Claims
Absorption

When smoked, T.H.C. is rapidly absorbed into the blood and distributed first to the brain. Then, it is redistributed to the rest of the body.

So, within 30 minutes, much is gone from the brain.
The Psychological and Cardiovascular effects occur together usually 5-10 minutes.

The T.H.C. remaining in the blood has a half life of about 19 hours but metabolites are formed in the liver and have a half life of 50 hours.

After 1 week, 25% to 30% of T.H.C. and its metabolites may remain in the body SINGLE USE.

Complete Elimination of a large dose of T.H.C. and its metabolites may take 3-4 weeks! In some instances, even longer.
Marijuana vs. Tobacco

Marijuana smoke contains 50% to 70% more carcinogenic hydrocarbons than tobacco.

Marijuana also produces high levels of an enzyme that converts certain hydrocarbons into their carcinogenic form. This may ultimately produce Cancer Cells.
Marijuana Smokers have many of the same respiratory problems that tobacco users experience:

- Daily cough
- Phlegm production
- Acute chest illness
- Risk of lung infections
- Obstructed airways
Marijuana as medicine

There are two FDA-approved, THC-based medications, dronabinol (Marinol®) and nabilone (Cesamet®), prescribed in pill form for the treatment of nausea in patients undergoing cancer chemotherapy and to stimulate appetite in patients with wasting syndrome due to AIDS.
Medications like these, which use purified chemicals derived from or based on those in the marijuana plant, are generally considered by researchers to be more promising therapeutically than use of the whole marijuana plant or its crude extracts.
Development of drugs from botanicals such as the marijuana plant poses numerous challenges. Botanicals may contain hundreds of unknown, active chemicals, and it can be difficult to develop a product with accurate and consistent doses of these chemicals.

Use of marijuana as medicine also poses other problems such as the adverse health effects of smoking and THC-induced cognitive impairment.
An additional concern with 'medical marijuana' is that little is known about the long-term impact of marijuana use by people with health- and/or age-related vulnerabilities to whom it is dispensed—such as older adults or people with cancer, AIDS, cardiovascular disease, multiple sclerosis, or other neurodegenerative diseases.
Further research will be needed to determine whether people whose health has been compromised by disease or its treatment (e.g., chemotherapy) are at greater risk for adverse health outcomes from marijuana use.
Dronabinol is useful for treating a variety of medical conditions including:

- Treatment of nausea in cancer chemotherapy patients
- To stimulate appetite in patients with wasting due to AIDS
- For pain and spasticity due to multiple sclerosis
- Treatment for glaucoma
Here are states with medical marijuana (as of November 2016):

PROS OF LEGALIZATION

- Boost in Revenue
- More Effective Criminal Justice and Law Enforcement
- Safety Controls
- Wider Access for Medicinal Use
- Medical Benefits for Cancer Patients
- Personal Freedom
- Reduced Street Justice Related to Drug Disputes
- Loss of Business for Drug Dealers (Including Terrorists).
<table>
<thead>
<tr>
<th>CONS OF LEGALIZATION</th>
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<tbody>
<tr>
<td>Addictive nature</td>
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<tr>
<td>Altered perception</td>
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<td>Gateway Drug Status (opens the individual to try other drugs)</td>
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<tr>
<td>Increase in Stoned Driving and Related Cases</td>
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<td>Increased Chances of the Drug Falling into the Hands of Children</td>
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<tr>
<td>Danger of Second-Hand Smoke to Bystanders</td>
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<tr>
<td>Damage to the Brain</td>
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<tr>
<td>Poor Lung Health</td>
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<tr>
<td>Risk of Getting Heart Disease</td>
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<tr>
<td>Poor Mental Health</td>
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YOU BE THE JUDGE...
If you or someone you know is suffering from substance use or mental health issues, reach out to someone for assistance.

-Your EAP can help—

www.alliedtrades-online.com
A new study finds that heavy marijuana use by adults could have long-term effects on the brain. What kinds of effects? WSJ's Jason Bellini has #TheShortAnswer.

Video Resource:

www.youtube.com/watch?v=t6FWHNNFzww&sns=em