Anna Conte was diagnosed with a rare form of epilepsy before she turned one. Each day, she would suffer from hundreds of seizures. Over the years, her parents sought access to the latest medications, but nothing seemed to help. Her parents decided they wanted to try medical marijuana because anecdotal evidence suggested it had helped other patients with similar conditions. However, the Contes lived in New York where medical marijuana was illegal.

The Contes succeeded in pressuring New York legislators to change the law, but their success came too late. New York approved medical marijuana in June 2014, just a month before Anna died at the age of 9. Later, Anna’s mother said no one should die “because of a ZIP code.”

Anna’s story is not unique. In Colorado, where medical marijuana is legal, there are over 3,000 patients on a waiting list to receive Charlotte’s Web, a kind of marijuana that reduces epileptic seizures but does not make the patient feel “high.” Distribution has been slow due to high demand. Many families have moved to Colorado just to have access to medical marijuana; Anna’s parents had started the process as well when they lost her.

About half of U.S. states permit medical marijuana, but even in those states it is still controversial. Some physicians believe that evidence for the benefits of marijuana is purely anecdotal and refuse to prescribe it. Critics of medical marijuana believe that it will cause more crime and is just a front for people who want to use marijuana for fun. They also say marijuana is addictive and can lead to using harder drugs. Finally, critics argue that smoking is bad for your health and that seeing marijuana as a medicine sends the wrong message to kids.

Other doctors believe the benefits of marijuana outweigh the risks of using it. Supporters cite the range of illnesses that can be eased by marijuana—from nausea associated with chemotherapy to post-traumatic stress disorder. They argue that marijuana has been used as a medicine for over 4,000 years and that other countries such as Canada and Italy allow medical marijuana. Also, supporters argue that allowing medical distribution will decrease crime since those seeking to help loved ones will not have to purchase marijuana illegally.

Should everyone have access to medical marijuana regardless of their age or location? What do you think?
USE THE FOCUS WORDS

distribution (noun) the act of giving out

☞ Sample Sentence: Medical marijuana is legal in California and in a few countries like Canada, Holland, and Italy, but there are laws in these places about its distribution.

☞ Turn and Talk: Why do some elementary schools prohibit the distribution of cake or cookies for student birthdays?

outweigh (verb) to be greater or more important than

☞ Sample Sentence: Supporters say that marijuana easily meets the government criteria that a medicine’s benefits to users will outweigh its risks.

☞ Turn and Talk: Do you think the risks associated with playing football (e.g., concussions, broken bones) outweigh the fun and enjoyment some kids get from it?

anecdotal (adjective) based on personal experience

☞ Sample Sentence: Supporters argue that both anecdotal evidence and research evidence show that medical marijuana is beneficial to some patients.

☞ Turn and Talk: Have you ever thought something based on a friend’s anecdotal observation that turned out not to be true?

front (noun) an awkward, often faked, appearance

☞ Sample Sentence: They argue that the medical marijuana initiative is a front for people who are really just using marijuana for fun.

☞ Turn and Talk: Are some television shows just a front for selling products during commercial breaks?

sought (verb) looked for (past tense of seek)

☞ Sample Sentence: Danny’s mother was so desperate to help him that she sought out organizations that would help her acquire marijuana without getting into trouble.

☞ Turn and Talk: When have you sought help from a tutor or teacher this school year?
DO THE MATH

Option 1: Medical marijuana is legal in California. Legislators, or lawmakers, looked at empirical (experiment-based) evidence and anecdotal evidence of marijuana’s benefits for sick people. They also considered the fact that some people might pretend to be sick as a front in order to obtain marijuana for recreational use. The legislators decided that the benefits of providing medical marijuana outweighed the risks of possible drug abuse.

People who seek out medical marijuana fall into several different categories. This graph shows the distribution of medical marijuana users, as reported by ABC7 News. Forty percent use medical marijuana for chronic pain. This includes people with arthritis, multiple sclerosis (or M.S), and migraine headaches. What fraction is equal to 40%?

A. $\frac{1}{4}$
B. $\frac{4}{9}$
C. $\frac{2}{5}$
D. $\frac{40}{10}$

Option 2: After California legalized medical marijuana, stores called “dispensaries” now distribute marijuana to people who have a doctor’s prescription for the drug. Occasionally, government agents have sought to enforce federal anti-marijuana laws by raiding dispensaries and making arrests. The Drug Enforcement Agency (DEA) cited anecdotes of doctors who wrote thousands of marijuana prescriptions. Federal officials claimed these medical dispensaries were a front for selling a drug that was being used recreationally most of the time. They said that the need to enforce federal laws banning marijuana outweighed the benefits of marijuana to legitimate medical users.

In 2014, it was estimated that the state of California received $100 million in taxes from medical marijuana sales. If medical marijuana was taxed at 8.4%, which expression could be used to calculate California’s medical marijuana sales in 2014?

A. $100,000,000 \div 0.084$
B. $100,000,000 + 0.084$
C. $100,000,000 \times 0.084$
D. $100,000,000 - 0.084$

Discussion Question: People who seek to buy medical marijuana range from cancer patients who are truly suffering to people who pretend to have headaches as a front to get a recreational drug. What do you find more troubling: anecdotes about suffering people who are denied the marijuana that could make them feel better, or anecdotes about people who lie to get marijuana that they use for fun? Should doctors who distribute thousands of medical marijuana prescriptions be investigated? Do the abuses of the system outweigh the benefits that medical marijuana can provide?
Think Scientifically

Ms. Kahn’s Life Science class was studying the human nervous system and the conversation turned to chronic pain (pain that continues over a long period of time). “My grandfather has chronic pain from cancer in his bladder,” said Mario. “He sought help from his doctor. The doctor gave him a prescription for medical cannabis—or marijuana—to relieve the pain, and it’s helping a lot. I read that thousands of people legally smoke or eat cannabis to help reduce chronic pain. Cannabis is legally distributed in about half of U.S. states and in Washington, D.C.”

“Wait a minute,” said Alyssia. “Marijuana may help a few people, but it’s a terrible drug for kids who abuse it. That problem outweighs the benefits that some people get. Legalizing marijuana is a front to make it easier for teens to smoke it!”

Mario disagreed. “Medical cannabis has been legal here for several years, and I know a couple teens who quit using marijuana. So there is a correlation between legal medical cannabis and a drop in teens smoking marijuana.”

“A couple people? That’s just anecdotal, not real evidence,” answered Alyssia.

Mario and Alyssia decided to work together to find statistics that might help resolve their disagreement. On the website ProCon.org, they found the following data about teen marijuana use in 1999 and 2006:

How does legalizing medical marijuana affect teen use of marijuana?

Note: Marijuana use in these statistics refers to “past-month” use. That is, a survey or interview question asks something like, “Have you used marijuana in the past month?”

**TABLE 1: Percent of teens reporting marijuana use**

<table>
<thead>
<tr>
<th>States with legal medical marijuana</th>
<th>1999</th>
<th>2006</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>8.96%</td>
<td>8.45%</td>
<td>-0.51%</td>
</tr>
<tr>
<td>States without legal medical marijuana</td>
<td>7.81%</td>
<td>6.71%</td>
<td>-1.10%</td>
</tr>
</tbody>
</table>

**TABLE 2: Change in teen use of marijuana in the 10 states that had legal medical marijuana as of 2006**

<table>
<thead>
<tr>
<th>State (year legalized)</th>
<th>Change from 1999–2006</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alaska (1999)</td>
<td>↓ decrease</td>
</tr>
<tr>
<td>California (1996)</td>
<td>↓ decrease</td>
</tr>
<tr>
<td>Colorado (2000)</td>
<td>↓ decrease</td>
</tr>
<tr>
<td>Hawaii (2000)</td>
<td>↓ decrease</td>
</tr>
<tr>
<td>Maine (1999)</td>
<td>↑ increase</td>
</tr>
<tr>
<td>Montana (2004)</td>
<td>↓ decrease</td>
</tr>
<tr>
<td>Nevada (2000)</td>
<td>↓ decrease</td>
</tr>
<tr>
<td>Oregon (1998)</td>
<td>↓ decrease</td>
</tr>
<tr>
<td>Vermont (2004)</td>
<td>↑ increase</td>
</tr>
<tr>
<td>Washington (1996)</td>
<td>↓ decrease</td>
</tr>
</tbody>
</table>

**TABLE 3: The 10 states with the highest percent of teens who reported past-month marijuana use in 2006**

<table>
<thead>
<tr>
<th>State</th>
<th>Teen marijuana use</th>
<th>Medical marijuana</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maine</td>
<td>10.99%</td>
<td>legal</td>
</tr>
<tr>
<td>Montana</td>
<td>10.56%</td>
<td>legal</td>
</tr>
<tr>
<td>Vermont</td>
<td>10.08%</td>
<td>legal</td>
</tr>
<tr>
<td>Rhode Island</td>
<td>9.74%</td>
<td>illegal</td>
</tr>
<tr>
<td>Massachusetts</td>
<td>8.96%</td>
<td>illegal</td>
</tr>
<tr>
<td>Connecticut</td>
<td>8.40%</td>
<td>illegal</td>
</tr>
<tr>
<td>Oregon</td>
<td>8.36%</td>
<td>legal</td>
</tr>
<tr>
<td>Alaska</td>
<td>8.26%</td>
<td>legal</td>
</tr>
<tr>
<td>New Hampshire</td>
<td>8.21%</td>
<td>illegal</td>
</tr>
<tr>
<td>New York</td>
<td>7.81%</td>
<td>illegal</td>
</tr>
</tbody>
</table>

By pointing to data in Table 1, Mario argued that in states where medical use of cannabis was legal, the percent of teen users decreased. But Alyssia used the same table to argue that legalizing medical cannabis actually caused an increase in teenagers’ abuse of marijuana. What valid conclusions do you think can be drawn from Table 1?

Use evidence from all three tables to argue that either Mario or Alyssia is correct, or perhaps that both have valid arguments.
SHOULD EVERYONE HAVE ACCESS TO MEDICAL MARIJUANA?

DEBATE THE ISSUE
Pick one of these positions (or create your own).

A
- Everyone should have access to medical marijuana.

OR

B
- Access to medical marijuana should be carefully regulated and only available to certain patients.

OR

C
- Medical marijuana should be illegal.

OR

CREATE YOUR OWN

Jot down a few notes on how to support your position during a discussion or debate.

Be a strong participant by using phrases like these:
- Can you show me evidence in the text that...
- You make a good point, but have you considered...
- I believe that...
- I agree with you, but...
TAKE A STAND

Support your position with clear reasons and specific examples. Try to use relevant words from the Word Generation list in your response.

distribution | outweigh | anecdotal | front | sought