Good morning my name is Melissa Sentiff I have been asked to appear today as a member of the Communities That Care prevention coalition to provide educational materials about the science of medical marijuana and marijuana use.

Medical marijuana generally refers to the whole unprocessed marijuana plant or its extracts. Neither the plant and extracts are approved or recognized as medicine by the US Food & Drug Administration (FDA). For the FDA to approve medicine, it requires large scale clinical trials to document the benefits and risks.

What are the components of marijuana? Within the marijuana plant, there are 100 strains of the active chemical cannabinoids. There are two primary strains of therapeutic interest, cannabinoids THC and CBD. Each officers different aspects, as THC is the psychoactive element that produces a high. CBD is non-psychoactive and will not produce a high.

The FDA has conducted studies and approved two medications for treatment to address the side effects of chemotherapy and AIDS. To approve marijuana based medicines the FDA would require controlled trials to fulfill the requirements to meet effectiveness and safety. Within these trials, there would be established doses and regimens for use and a regulated system of prescribing and dispensing. At the conclusion of the trials, they would have documentation of benefits and risks. FDA approved marijuana produced for approved medicine would have been grown in pesticide free greenhouses with extracted oils, high in CBD and 98% THC free.

The alternative to FDA approved medicines is Medical Marijuana. With this form of marijuana there are limited trials, no established doses and regimens for use, and no doctors recommend action or certifying need. This product is sold at dispensaries or budtenders. Medical marijuana grown in an uncontrolled environment may be contaminated with neurotoxic pesticides, is high in the mind altering THC while low in the CBD.

Another effect of medical marijuana is how easily it can be diverted from licensed users to teens. In states with legal medical marijuana, teens report it is "fairly easy" or "very easy" to access. States with legal medical marijuana lead the nation with the highest rate of past month marijuana use among 12 – 17 year olds. As the debate on medical marijuana continues trends show that youth are increasing their marijuana use, but their perceived risk of harm is decreasing. The 2013 Pennsylvania Youth Survey shows a slight decrease in the perceived risk of harm compared to 2011. In other words, young people do not perceive a risk of harming themselves by using marijuana.

Studies show that marijuana is particularly harmful to the developing brains of young people, causing long-term impairment in cognitive development. Adolescents under the age of 18 who use marijuana more than once a week may lose up to 8 IQ points, which may put them at a disadvantage when compared to peers. Lower IQ leads to poor academic performance due the negative effects on motivation, memory, and learning. It may make it more difficult for them to get jobs and be productive members of society

Data from the National Institute on Drug Abuse states that 1 in 6 adolescents that try marijuana become addicted. Among youth reviving substance abuse treatment, marijuana accounts for the largest percentage of admissions: 74 percent among those aged 12–14, and 76 percent among those 15–17.

Marijuana touches public safety by affecting user's short-term memory, judgment, mental aptitude, and motor coordination. It is the most prevalent illegal drug in impaired driving and motor vehicle crashes. Not only does it affect a person's ability to operate a vehicle, it has consequence on employment. With more than 6,000 companies, nationwide requiring pre-employment drug test there is difficulty filling open jobs. Many companies also perform random drug screening after employment.

Scientists do not yet know whether the use of marijuana causes chronic mental illness. High doses can induce an acute psychosis (disturbed perceptions and thoughts, including paranoia) and/or panic attacks. In people who already have schizophrenia, marijuana use can worsen psychotic symptoms, and evidence to date suggests a link between early marijuana use and an increased risk of psychosis among those with a preexisting vulnerability for the disease. It has also been linked to mental health problems such as depression anxiety, suicidal thoughts among adolescents, and personality disturbances, including a lack of motivation to engage in typically rewarding activities.

As you look at this matter, look to other states preceding Pennsylvania. States like Colorado where in a 6 year window they saw an increase in the number of medical marijuana cardholders from 1,000 to 108,000 and the number of dispensaries rose from 0 to 532.

In closing, I would like to point out that the statements from several credible societies and organizations. Thank you for the opportunity to present this information to aid you in your decision-making process.