## Position Statement on the Use of Medical Marijuana for Tourette Syndrome

The Tourette Association of America (TAA) is the leading national non-profit organization in the United States working to make life better for all people affected by Tourette Syndrome and Tic Disorders. As part of that mission the TAA has encouraged and funded research into all aspects of Tourette Syndrome including pharmacological, behavioral, and alternative treatments and therapies.

Inquiries about the use of medical marijuana (cannabis) to alleviate the symptoms of Tourette Syndrome have been on the rise. While some adult members of our community have reported reduced tics when using medical marijuana, others have reported adverse reactions or no effect at all. Medical marijuana has two primary chemical components: Delta-9- tetrahydrocannabinol (THC) and Cannabidiol (CBD). Medical marijuana and cannabis-based medications that include THC and cannabis extracts have been reported to reduce symptoms of Tourette Syndrome in small scientific studies, patient reports, and anecdotal case reports. They are currently used to treat adult patients in Germany, Israel and Canada. There is insufficient data to support that CBD, without the addition of THC, is an effective treatment for Tourette Syndrome.

CBD-based oils, capsules, edibles and other formulations have become widely used over the last decade and are available throughout the country and online. One CBD based medicine was approved in June 2018 by the FDA specifically to treat two rare forms of epilepsy, making it the first federally sanctioned medical use for CBD in the United States. The FDA has supported research of CBD-based medications and the NIH database reflects myriad studies of CBD as a potential treatment for neurological and neuropsychiatric disorders including epilepsy, Parkinson's Disease, dyskinesia, dystonia, and anxiety.

Although there is no evidence that CBD alone is effective in treating Tourette Syndrome, anxiety is known to increase the frequency and severity of tics and testimonials for CBD as an effective anxiety reducing treatment are numerous.

To better understand the role of medical marijuana in treating Tourette Syndrome and Tic Disorders, the TAA formed a Cannabis Consortium comprised of leading clinicians and researchers in the field. They evaluated the currently available research and data on the safety and efficacy of medical marijuana and cannabis-based medicines, and have advised us that due to the lack of randomized, large scale, placebo controlled clinical studies, scientific evidence is insufficient to reach a conclusion on the safety and/or the efficacy of medical marijuana for the treatment of Tourette Syndrome and Tic Disorders. In the absence of conclusive medical research, they are especially concerned about medical marijuana in the treatment of children and adolescents. The Tourette Association of America shares that concern.

Medical marijuana is not regulated by the Food and Drug Administration (FDA) and is not sanctioned under federal law. However, at the time of this writing, 33 states and the District of Columbia have legalized medical marijuana to treat specific conditions including those that cause muscle spasms, seizures, and chronic pain. Several states have specifically approved medical marijuana for the treatment of Tourette Syndrome including Arkansas, Illinois, Minnesota, Missouri, New Jersey, and Ohio. Still other states permit individuals to access medical marijuana providing a physician certifies that no other medications have provided relief. Medical marijuana is dispensed by state regulated dispensaries, under the direction of a pharmacist, and only after a physician certifies that a patient meets that state's criteria.

The absence of federal laws sanctioning medical marijuana nationwide, as well as its classification as a Schedule I drug, precludes large-scale controlled research studies from being conducted at academic/research institutions in America. In Germany, a large placebo-controlled study designed to investigate the efficacy and safety of cannabis in patients with Tourette Syndrome is currently recruiting participants. The TAA supports efforts to allow research on medical marijuana to move forward in this country as well. The TAA also supports a drug schedule re-evaluation for medical marijuana which may open the way for clinical trials to assess the efficacy of potential new medications to treat Tourette Syndrome.

Many members of our community have pervasive and painful tics and co-occurring conditions that are not well controlled by current FDA approved options. While there are three medications the FDA has specifically approved for the treatment of Tourette Syndrome, their side effects are significant and they are no longer considered a first option for treatment. More commonly, FDA approved medications are administered off label to children, adolescents, and adults, often effectively but perhaps equally often with adverse, sometimes significant, side effects. The Tourette Association of America recently conducted an impact survey which found that 47% of adults and 44% of the parents of children with Tourette Syndrome do not feel their or their children's symptoms are adequately controlled by existing medications. We recognize the need for more effective treatments to improve the quality of life for all people with Tourette Syndrome and Tic Disorders.

The Tourette Association of America supports increased research and large scale controlled clinical trials by increasing funding and access to medical marijuana. Thus far, the TAA has funded 5 research grants in Canada, Israel and the U.S. on medical marijuana and related drugs that target cannabis pathways, but more research is needed. The TAA also supports the inclusion of Tourette Syndrome as an approved condition in states where medical marijuana is available to adults with other intractable and incurable conditions but urges caution.

Members of our community who choose to explore medical marijuana as a treatment option should only do so with close medical guidance and after carefully considering the potential risks and benefits. The Tourette Association of America neither recommends nor prescribes specific medications including FDA approved pharmaceuticals and medical marijuana.