

## A Weekly FAX from the Center for Substance Abuse Research

University of Maryland at College Park \*

### *Is Marijuana Potency Increasing?*

*by Maggie Hsu*

One of the issues in the current debate about marijuana is that the marijuana available today is more potent than that available in the 60s and 70s. Recently, I conducted an informal inquiry into the variation in marijuana potency over the past few decades.

The National Institute on Drug Abuse's Marijuana Potency Monitoring Program (MPMP), a project based at the University of Mississippi at Oxford, is the primary source of marijuana potency data for the United States. The MPMP extracts and measures the amount of tetrahydrocannabinol (THC), the primary active ingredient in marijuana. Samples are obtained from the Drug Enforcement Administration (DEA) and state and local law enforcement agencies. Although data from the MPMP show that the average potency of commercial marijuana has increased from 0.85% in 1974 to 4.18% in 1993, there are some problems with interpreting these data.

One obstacle to interpreting these estimates involves the extraction and measurement techniques employed. The techniques used in the 1970s to extract and measure THC were more "primitive" compared with today's methodologies. Thus, the estimates may not be comparable, which makes any increasing trends in potency difficult to discern.<sup>1</sup>

There are also problems with how earlier samples were stored prior to submission to MPMP for testing. It has been suggested that the THC in the early samples had degraded due to improper storage of samples,<sup>2</sup> and it is unclear if this remains a problem today. Any changes in storage procedures, however, could have an impact on comparisons of test results before and after the changes.

As I looked more closely at the data, I began to question the validity of the marijuana potency estimates. Does data on average marijuana potency from a nonrandom sample of law enforcement marijuana seizures accurately reflect the potency of marijuana being used by Americans? In the absence of systematized sampling procedures, perhaps it would be more useful to look at the range of THC content found in a given year. For example, in 1972 the Canadian Commission of Inquiry into the Non-Medical Use of Drugs conducted studies of illicit cannabis that included samples collected from police seizures as well as samples provided by private individuals. The Commission found an average potency of less than 1% THC, but the THC content in the sample ranged from .02% to 3.46%.<sup>3</sup> Comparing the range of THC found in marijuana seizures over the years may be more useful than comparing averages.

While there are many reasons to be concerned about the growing use of marijuana, the evidence surrounding the increasing potency of marijuana is, at best, equivocal. Before any methodologically sound decisions can be made about trends in marijuana potency, more rigorous, representative, and uniform methods will have to be established for the collection, storage, and testing of samples. I would be interested in hearing about any relevant information that recipients of the CESAR FAX may have.

<sup>1</sup>Forensic Drug Abuse Advisor, Vol. 7 (1), January 1995, pp. 7-8.

<sup>2</sup>TH Mikuriya and MR Aldrich. "Cannabis 1988: Old Drug, New Dangers, the Potency Question," Journal of Psychoactive Drugs, Vol. 20(1), Jan-Mar 1988, pp. 47-55.

<sup>3</sup>Canadian Commission of Inquiry into the Non-Medical Use of Drugs, "Cannabis: A Report of the Commission of Inquiry into the Non-Medical Use of Drugs," 1972, pp. 25-32.

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