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Medical Marijuana in California, 1996-2006

For 10 years a vast public-health experiment has been conducted in the nation's most populous state. What have doctors learned about the medical efficacy and safety of cannabis?

By Tod Mikuriya, Jeffrey Hergenrather, Philip A. Denney, Frank H. Lucido, David Bearman, Claudia Jensen, Tom O'Connell, Marian Fry, William Toy, Robert Sullivan, Hanya Barth, William Eidelman, Helen Nunberg, William Courtney, Christina Paoletti *et al* [1]

In November, 1996, California voters enacted Proposition 215, making it legal to grow and use cannabis, with a doctor's approval, for medical purposes. Prop 215 didn't create a record-keeping system because the authors didn't trust the government and didn't want to generate a master list of cannabis users. So, over the course of the past decade, a vast public health experiment has been conducted in California but no state agency has been tracking doctors who approve cannabis use or patients who medicate with it.

To assess the results in the absence of data garnered by the government, *O'Shaughnessy's* surveyed doctors associated with the Society of Cannabis Clinicians. The SCC was founded by Tod Mikuriya, MD, in 2000 so that doctors monitoring their patients' use of cannabis could share data for research purposes (and, alas, respond to threats from federal and state authorities). More than 20 doctors have attended SCC meetings, which are held quarterly. Philip A. Denney, MD, is the current president.

"Approve," not "recommend," is the apt term, since more than 95 percent of the patients consulting specialists had been self-medicating previously.

Twenty-one doctors with cannabis-oriented practices were interviewed briefly by phone in the Fall of 2006. Of these, 14 responded to an emailed questionnaire. (One responded on behalf of colleagues at nine offices.) Between them, physicians associated with the SCC have approved cannabis use by approximately 160,000 patients. "Approve," not "recommend," is the apt term, since more than 95 percent of the patients consulting specialists had been self-medicating previously.

Survey questions

1. How many patients will have received your approval to use cannabis through October 2006?
2. What percentage had been self-medicating with cannabis prior to consulting you?
3. With what medical conditions have they presented? List top five and approximate percentage (total can exceed 100%).
4. What results do patients report? How does cannabis appear to work in treating their symptoms?
5. What medications has cannabis enabled your patients to stop taking or cut back on?
6. Have you encountered any out-of-the-ordinary conditions being treated effectively with cannabis? Please elaborate.
7. What have you learned *re* strains and dosage?
8. Have you compiled demographic data or can you estimate the breakdown with respect to your patients' age, gender, race, economic status?
9. To how many patients have you recommended cannabis as a treatment for Attention Deficit Disorder?
10. How many of your patients are consciously substituting cannabis for alcohol or using for harm-reduction purposes.
11. Have you observed or had reports of adverse effects from cannabis? If so, please describe.

Physicians were asked to include any insights and observations they considered worth sharing with colleagues, patients, and the community at large. Written responses to the survey did not adhere strictly to the questions as posed and varied in level of detail. Extensive excerpts follow.

Physician Responses

Tod Mikuriya, MD (Berkeley), was the first California doctor to specialize in cannabis consultations. In the early 1990s his interviews with members of the San Francisco Cannabis Buyers Club documented Dennis Peron's observation that members were using cannabis to treat a surprisingly wide range of medical problems. Mikuriya advocated extending legal protection to cannabis users treating "...any other illness for which marijuana provides relief."

Approvals issued to date: 8,684.
Previously self-medicating: >99%
Category of use:
Analgesic/immunomodulator 41%
Antispasmodic/anticonvulsant 29%
Antidepresssant/Anxiolytic 27%
Harm reduction substitute: 4%

Results reported are dependent on the conditions and symptoms being treated. The primary benefit is control without toxicity for chronic pain and a wide array of chronic conditions. Control represents freedom from fear and oppression. Control —or lack thereof— is a major element in self-esteem.

With exertion of control, with freedom from fear of incapacity, quality of life is improved. The ability to abort an incapacitating attack of migraine, asthma,

continued below

[1]*The authors are medical doctors practicing in California. Three requested anonymity.*

Jeffrey Hergenrather, MD (Sebastopol) is a former general practitioner who has been conducting cannabis consultations since 1999.

Approvals issued: 1,430
Prior self-medicating: 99%
Conditions treated with cannabis:
Chronic pain (62%), Depression and other mental disorders (30%), Intestinal disorders (12%), Harmful dependence (10%), Migraine (9%) are the most common conditions being treated. A breakdown appears in the box on page 5.

What Patients Report

A cannabis specialist soon becomes aware of two remarkable facts. The range of conditions that patients are treating successfully with cannabis is extremely wide; and patients get relief with the use of cannabis that they cannot achieve with any other pharmaceuticals.

The testimonies that I hear on a daily basis from people with serious medical conditions are moving and illuminating. From many people with cancer and AIDS come reports that cannabis has saved their lives by giving them an appetite, the ability to keep down their medications, and mental ease.

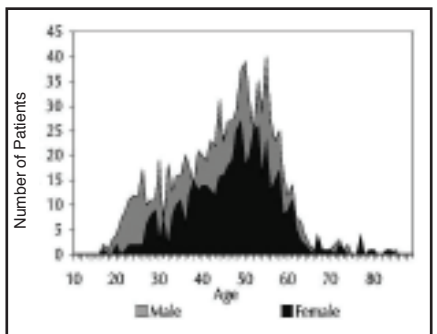
No other drug works like cannabis to reduce or eliminate pain without significant adverse effects. It evidently works on parts of the brain involving short-term memory and pain centers, enabling the patient to stop dwelling on pain.

Cannabis helps with muscle relaxation, and it has an anti-inflammatory action. Patients with rheumatoid arthritis stabilize with fewer and less destructive flare-ups with the regular use of cannabis.

Spasticity cannot be treated any more quickly or efficiently than with cannabis.

Other rheumatic diseases similarly show remissions. Spasticity cannot be treated any more quickly or efficiently than with cannabis, and, again, without significant adverse effects.

Patients who suffer from migraines can reduce or omit conventional medications as their headaches become less frequent and less severe.



Age of Patients seen by Jeffrey Hergenrather, MD, in Sonoma County is graphed. The median age for men is 45.9 years, for women 48. The steep fall-off of patients over 65 —the group most in need of a palliative for chronic pain— reflects the unfamiliarity of an older generation with cannabis.

About half of the patients with mood disorders find that they are adequately treated with cannabis alone while others reduce their need for other pharmaceuticals. In my opinion, there is no better drug for the treatment of anxiety disorders, brain trauma and post-concussion syndrome, ADD and ADHD, obsessive compulsive disorder, and post-traumatic stress disorder.

Patients with Crohn's disease and ulcerative colitis are stabilized, usually with comfort and weight gain, while most are able to avoid use of steroids and other potent immunomodulator drugs.

People who were formerly dependent on alcohol, opiates, amphetamines and other addictive drugs have had their lives changed when substituting with cannabis.

Patients with end-stage renal disease on dialysis and those with transplanted kidneys show mental ease, comfort, and lack of significant graft-versus-host incompatibility reactions in my small series.

Diabetics report slightly lower and easier-to-control blood sugar levels, yet to be studied and explained.

Sleep patterns are typically improved, with longer and deeper sleep without any hangover or significant adverse effects.

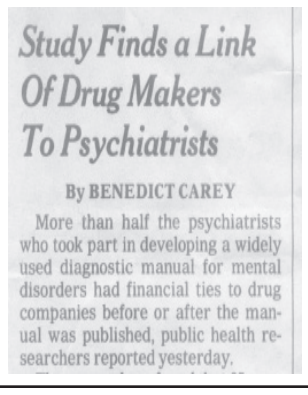
Many patients with multiple sclerosis report that their condition has not worsened for many years while they have been using cannabis regularly. MS and other neurodegenerative diseases share the common benefits of reduced pain and muscle spasms, improved appetite, improved mood and fewer incontinence problems.

Many patients with epilepsy are adequately treated with or without the use of other anticonvulsants.

Patients with skin conditions associated with systemic disease such as psoriasis, lupus, dermatitis herpetiformis,

continued below

The Context of Prohibition:



Study Finds a Link Of Drug Makers To Psychiatrists

By BENEDICT CAREY

More than half the psychiatrists who took part in developing a widely used diagnostic manual for mental disorders had financial ties to drug companies before or after the manual was published, public health researchers reported yesterday.

MMJ in California —Mikuriya *from page 1*

anxiety, or depression empowers.

Relief from the burden of criminality through medical protection enhances a salutary self-perception.

Alteration in the perception of and reaction to pain and muscle spasticity is a unique property of cannabis therapy.

Patient reports are diverse yet contain common elements. 100% report that cannabis is safe and effective. Return for follow-up and renewal of recommendation and approval confirms safety and efficacy.

Cannabis seems to work by promoting homeostasis in various systems of the body. Its salient effects are multiple and concurrent. They include—

• Restoration of normal functioning of the gastrointestinal tract with normalization of peristalsis and restoration of appetite.

• Normalizing circadian rhythm, which relieves insomnia. Sleep is therapeutic in itself and synergistically helps with pain control.

• Easement of pain, depression, and anxiety. Cannabis as an anxiolytic and antidepressant modulates emotional reactivity and is especially useful in treating post-traumatic stress disorders.

Patients treated for ADHD (ICD-9 Categories 314.00, 314.01, 314.8): 92

Patients using cannabis as a substitute for alcohol: 683.

The slow poisoning by alcohol with its sickening effects on the body, psyche, and family can be relieved by cannabis.

Medications no longer needed? Opioids, sedatives, NSAIDS (non-steroidal anti-inflammatories), and SSRI anti-depressants are commonly used in smaller amounts or discontinued. These are all drugs with serious adverse effects.

Opioids and sedatives produce depression, demotivation, and diminished mobility. Weight gain and diminished functionality are common effects. Cognitive and emotional impairment and depression are comorbid conditions. Opioids adversely effect vegetative functioning with constipation, dyspepsia, and gastric irritation. Pruritus is also an issue for some. Circadian rhythms are disrupted with sleep disorders and chronic sedation caused by these agents. Dependence and withdrawal symptoms are more serious than with sedatives.

Opioids are undoubtedly the analgesic of choice in treating *acute* pain. For *chronic* pain, however, I recommend the protocol proposed by a doctor named Fron-mueller to the Ohio Medical Society in 1859: primary use of cannabis, resorting to opiates for episodic worsening of the condition. Efficacy is maximized, tolerance and adverse effects are minimized. (Neither cannabis nor human physiology has changed since 1859.)

NSAIDs can be particularly insidious for those who do not immediately react with gastric irritation and discontinue the drug. Chronic irritation with bleeding may produce serious morbidity. Most often, the dyspepsia produced is suppressed with antacids or other medications. Many patients tolerate acute intermittent use but not chronic use.

SSRIs, if tolerated, coexist without adverse interaction with cannabis. Some SSRI users say cannabis is synergistic in that it treats side effects of jitteriness or gastrointestinal problems.

Medical cannabis users are typically treating chronic illnesses —not rapidly debilitating acute illnesses.

Many patients report pressure exerted by the Veterans Administration, HMOs such as Kaiser Permanente, and workers' compensation program contractors to remain on pharmaceutical regimens. A significant number describe their prescribed drugs as ineffectual and having undesirable effects.

"Mainstream" doctors frequently respond to reports of adverse effects by prescribing additional drugs. Instead of negating the problem, they often complicate it. Prevailing practice standards encourage polypharmacy —the use of multiple drugs, usually five or more.

Out of the ordinary conditions?

While all pain reflects localized immunologic activity secondary to trauma or injury, the following atraumatic autoimmune disorders (listed by ICD-9 code) comprise a group of interest:

Crohn's disease 555.9
Atrophie blanche 701.3
Melorheostosis 733.99
Porphyria 277.1
Thallasemia 282.4
Sickle cell anemia 282.60
Amyloidosis 277.3
Mastocytosis 757.33
Lupus 710.0
Scleroderma 710.1
Eosinophilia myalgia syndrome 710.5

These disorders are all of autoimmune etiology, difficult to treat. Specific metabolic errors such as amyloidosis and certain anemias warrant further study and may elucidate the underlying mechanisms of the illnesses and the therapeutic effects of cannabis.

Multiple sclerosis 340.0 with its range of severity varies in therapeutic response to cannabis.

Demographic Data:

Male patients: 6,247 (72%)
Female Patients: 2,437 (28%)

Two differences were discerned in use pattern. Women are more likely to use cannabis for psychotherapeutic purposes (32% to 18%). Men are more likely to use for harm reduction (4% to 1%).

A roughly bell-shaped curve describes the age of my patients.

0-18 years 9 (1%)
19-30 1639 (19%)
31-45 3109 (36%)
45-60 3243 (37%)
>61 684 (7%)

Additional Observations:

Proactive structuralism works. Meaning: people can create something and by doing so, set a precedent.

Medical cannabis users are typically treating chronic illnesses —not rapidly debilitating acute illnesses.

The cash economy works better than the bureaucratic alternative.

Word of mouth builds a movement.

The private sector is handling marijuana distribution because the government has defaulted.

Cannabis was once on the market and regulated, then it was removed from the market and nearly forgotten. Not all that we've learned in the past 10 years is new.

MMJ in California —Hergenrather *from page 1*

and eczema all report easement and less itching when using cannabis regularly.

Airway diseases such as asthma, sleep apnea, chronic obstructive pulmonary disease, and chronic sinusitis deserve special mention because I encourage the use of cannabis vapor or ingested forms rather than smoking to reduce airway irritation.

Finally, most obese and morbidly obese patients respond with weight loss and improved self esteem. I believe that cannabis and psychotherapy work well together in fostering behavioral changes.

Adverse effects?

Over the years that I have specialized in cannabis therapeutics, health benefits reported by patients have been substantiated and explained by findings from research centers around the world.

Is there a downside to the use of cannabis? The sense of intoxication rarely lasts longer than an hour and tends to be more troubling to the novice than to

continued on next page

Conditions Treated With Cannabis as per Prop 215

I record diagnoses as ICD-9 numbers, based on the International Classification of Diseases, Ninth Revision. This list, based on Proposition 215 disease categories, aggregates the diagnoses for numerous conditions such as cancers, lower back pain, and neck pain, though there are many different causes and diagnoses within these groups. —*J.H.*

Cancer (94 patients, 7%) includes all malignancies, chemotherapy convalescence and symptoms specific to cancer.

Anorexia (42 patients, 3%) includes anorexia and the more severe condition, wasting syndrome.

AIDS (2%) I categorize under infectious diseases (159 cases, 11%), along with Viral hepatitis C (8%), Viral hepatitis B (0.5%), Lyme disease (0.5%), Herpetic infections (< 0.5%).

Chronic pain (887 patients, 62%). This is an incomplete figure for pain syndromes, many of which fall into the categories of arthritis, rheumatic disease, neurodegenerative diseases and intestinal disorders. My pain cases fall into two broad categories, chronic pain (44%), and inflammatory musculoskeletal conditions (18%). Suffice it to say that the groupings do not represent clear etiologies (causes).

Chronic pain can be broken into lower back pain (21%); neck pain (13.5%); fibromyalgia (3.5%); neuropathy and neuralgia (3%); thoracic back pain (2%); gynecological pain (2%); TMJ (1%); and other pain syndromes (1%), including phantom limb syndrome and myofascial pain syndrome.

Inflammatory musculoskeletal conditions include shoulder pain and rotator cuff syndrome (4%), knee pain (3%), carpal tunnel syndrome (2.5%), plantar fasciitis (1%), tenosynovitis (1%), forearm, wrist, and hand pain (1%), and other (2%), including reflex sympathetic dystrophy, Dupuytrens contractures, thoracic outlet syndrome, cubital tunnel syndrome, and Legg Calve Perthes disease.

Spasticity (70 patients, 5%) includes quadriplegia (2%), paraplegia (1%), other paralysis (1%), cerebral palsy and muscular dystrophy (0.5%), other tremors and spasms (0.5%).

Sensory organ disorders (50 cases, 3%), comprising **glaucoma (2%)** and others (1%), including blindness, tinnitus, Meniere's disease, and diabetic retinopathy.

Arthritis (331 patients, 23%), includes degenerative or osteoarthritis (4.5%), post-traumatic arthritis (5.5%), hip arthritis (3%), knee and lower extremity arthritis (6.5%), shoulder arthritis (3%), and others (0.5%).

Migraine (129 patients, 9%) includes classical migraine (7.5%), cluster headaches (1%), others (0.5%).

Other illnesses (1160 patients, 81%) categorized as

A) Mental disorders (30%): depression, major, reactive and unspecified (11%); anxiety disorder (5.5%); post-traumatic stress disorder (5%); bipolar disorder (2.5%); brain trauma and post concussion syndrome (2%); ADD (1%); and others (3%) including obsessive compulsive disorder, agorophobia, panic attacks, dysthemia, Tourette's syndrome and others.

B) Intestinal disorders (12%) includes: Gastroesophageal reflux disease (3.5%); irritable bowel syndrome, (3%); inflammatory bowel disease (1.5%); Crohn's and ulcerative colitis and gastritis (1%); peptic ulcer disease (1%); celiac disease (0.5%); pancreatitis (0.5%); and others (1%), notably esophageal stricture, diverticulitis, and nausea.

C) Harmful dependence (10%) on tobacco (3%), opioids (2%), alcohol (2.5%), and others (2.5%), including amphetamines, cocaine, mixed dependence and polypharmacy.

D) Organ failure (7.5%) includes diabetes, kidney failure, kidney transplants, dialysis, liver failure, adrenal failure, thyroid diseases.

E) Insomnia (6.5%)

F) Rheumatic diseases (4%), including rheumatoid arthritis (1.5%) and others (2.5%) including lupus, ankylosing spondylitis, scleroderma, psoriatic arthritis, interstitial cystitis, Sjogren's, chronic fatigue syndrome, Bechet's syndrome, polymyalgia rheumatica, optic neuritis, and unspecified autoimmune disease.

G) Neurodegenerative diseases (3%) such as multiple sclerosis (2.5%) and others (0.5%) including amyotrophic lateral sclerosis, Parkinson's disease, Charcot-Marie-Tooth disease and senile dementia.

H) Airway disease (3%) includes: asthma, sleep apnea, COPD, and chronic sinusitis.

I) Obesity (1.5%).

J) Epilepsy (1%) includes: grand mal, partial complex.

K) Psoriasis and other skin disorders (1%).

Medical Marijuana in California, 1996-2006 *from previous page*

the experienced user. For some people cannabis can induce dry mouth, red eyes, unsteady gait, mild incoordination, and short-term memory loss, all of which are transient. These effects are reportedly trivial compared to those brought on by pharmaceutical alternatives.

Cannabis use is steadily finding acceptance in society. Still, for many it remains awkward if not totally impractical in the workplace. People whose jobs require multi-tasking such as pilots, drivers, dispatchers, switchboard operators, and many professionals find the intoxicating effects of cannabis inappropriate in the workplace, and therefore reserve their use for after work.

Due to Prohibition, California growers have been denied the tools of analytical chemistry to test the cannabinoid contents of their plants. This has impeded the development of strains aimed at treating various conditions.

Strains

Cannabis is a complex, un-patentable plant with vast pharmacologic potential. Different strains contain different mixes of cannabinoids and terpenes that give them distinct qualities. Some strains energize you; others put you to sleep. Many patients, when they find a strain that suits their needs, try to obtain it on a regular basis. Unless they are growing their own from cuttings, however, they have to rely on growers and distributors to reproduce and make available the preferred strain from year to year.

Due to Prohibition, California growers have been denied the tools of analytical chemistry to test the cannabinoid contents of their plants. This has impeded the development of strains aimed at treating various conditions.

Nevertheless, patients continue to educate themselves about cannabis as medicine and how best to use it. Over the years that I have specialized in cannabis therapeutics, health benefits reported by patients have been substantiated and explained by findings from research centers around the world.

Demographics:

Gender: 62% male, 38% female.

Ages range from 14 to 86 years old. The male mean age is 45.9 years with a median age of 46. The female mean age is 47.4 with a median age of 48 years. The graphs of the age and gender distribution are similar with the exception that there is a bump in the leading edge of my male patient population as compared to the females, which I account for by young men's work injuries, sports injuries, motor vehicle accidents, and problems stemming from military service, including injuries and post-traumatic stress disorder.

Dr. Hergenrather with his mother at the Patients Out of Time conference in Santa Barbara, April 2006.

The vast majority of patients in my practice are of Caucasian / Indo-European descent, with only about 1% African-American, 2% Native American, 1% Pacific Islanders, and 2% Asian.

Frank Lucido, MD (Berkeley) is a family practitioner who began approving patients' use of cannabis soon after the passage of Prop 215. He conducts about 900 cannabis consultations per year (including follow-up visits)

Approvals issued: >3,000

Previously self-medicating: 99%

Conditions treated with cannabis:

Chronic pain 75% Most diagnoses are musculoskeletal, i.e. disc disease, post-traumatic injuries, etc. Others include Fibromyalgia Syndrome (2%), Rheumatoid Arthritis, Psoriatic Arthritis, Systemic Lupus Erythematosis, Lyme Arthritis, Raynaud's Syndrome, Gout, Gulf War Syndrome.

Psychiatric problems (33%), including Depression, Chronic Anxiety, Insomnia, Bipolar, PTSD, ADHD, and OCD.

Neurologic problems (14%), including headache, Multiple Sclerosis, Restless Leg Syndrome, Parkinson's, Neuropathic Pain, Tremor, Seizure Disorder.

Genito-Urinary problems (5.6%), including severe Dismenorrhea, Menopausal Syndrome, Endometriosis, PMS, Interstitial Cystitis, Nephrolithiasis

Gastrointestinal (12.5%), including chronic abdominal pain, hepatitis C, Irritable Bowel Syndrome, Crohn's, Ulcerative Colitis, GERD, Anorexia, Nausea, Diverticulitis pain.

Others (11%), notably Glaucoma (3%), Medication side effects (2.6%), Asthma (2.3%), Cancer, lymphoma, leukemia, Meniere's/tinnitus.

Effects of cannabis:

Patients are able to be more active (work, exercise, etc.); sleep, eating and overall ability to function improved.

Drug use reduced?

Chronic pain patients report reduced use of opioids, NSAIDs, muscle relaxants, sleeping pills.

Psychiatric and insomnia patients reduce use of tranquilizers, SSRI antidepressants, and sleeping pills.

Neurologic patients reduce use of opioids, muscle relaxants, NSAIDS, triptans and other migraine headache remedies.

Unusual conditions treated?

Gulf War Syndrome. Patient uses cannabis to mitigate chronic neuropathic pain from nerve damage, chronic nausea, and migraine, as well as PTSD from his experiences in combat.

Comments re strains and dosage:

Patients vary tremendously in their dosage needs. In general, Sativa strains seem to have a mildly stimulating effect and are best for daytime use. Indica has a mildly sedative effect and is best for evening use. Both are reportedly effective for chronic pain.

Adverse effects?

Reported adverse effects are rare, in part because the patient coming to a medical cannabis consultation has already found cannabis to be of benefit.

I have had perhaps 10 patients in 10 years who had never tried cannabis or who hadn't used it in many years and were uncertain if it would effectively treat their current illness or symptoms.

Two patients have discontinued use in response to decreased productivity. The overwhelming majority report that they are MORE productive when their symptoms are controlled with cannabis.

Demographics:

In a recent series of 393 consecutive patients, 195 were male, 108 female. Their ages, plotted, would form a bell curve:

<18	2	30-39	60	60-69	24
18-20	4	40-49	80	70-79	1
21-29	42	50-59	89	80-89	1

ADHD patients?

Over the course of my practice I have approved cannabis use by about five patients per year for attention deficit disorders. In recent years, however, more patients report using cannabis to treat ADD and AD/HD, and I am issuing more approvals. The present rate is approximately one patient per month.

Cannabis as a substitute for alcohol?

I have had only three patients in 10 years whose primary diagnosis for cannabis use was alcolohism. Many recovering alcoholics are using cannabis for chronic anxiety and/or depression, so to some extent they are substituting it as a treatment for problems they previously self-treated with alcohol. Because alcohol can damage the liver and cause destructive behavior, cannabis use is rightly termed "harm reduction."

Marian Fry, MD (Cool) Mollie Fry graduated from UC Irvine School of Medicine in 1985 and began her career as a family practitioner. She stopped practicing in 1989 to home school her children. After Prop 215 passed, Fry, who is herself a breast cancer survivor, resumed seeing patients (employing a physician's assistant to handle the initial interview). Her husband, attorney Dale Schafer, established an adjoining practice to advise patients of their rights.

Fry and Schafer have been charged with cultivation under federal law. She continues to practice while fighting the charges.

Approvals issued: 12,000

Previously self-medicating: >80%

Conditions being treated:

Chronic pain, 85%. Includes all etiologies from systemic diseases, i.e., Fibromyalgia, Lupus, Rheumatoid Arthritis, to physical injuries such as fractures incurred in motor vehicle accidents, gunshot wounds , failed surgeries, Post-Traumatic Arthritis, Osteoarthritis and work-related problems

Psychiatric disorders, 15%. Includes PTSD, Depression, Anxiety, Insomnia, Panic Disorder.

Other illnesses include AIDS and Cancer (2%-3%), Glaucoma (1%-2%), Psoriasis and Eczema (1%-2%).

Results reported:

The majority of my patients report a decrease in the use of conventional pharmaceuticals. Approximately 90% of those using narcotics decrease their usage, and about half discontinue them altogether. Patients report feeling better able to face whatever illness they are dealing with. Many express relief that their pain and anxieties are being treated through a God-given plant. Cannabis enables them to feel a part of their own treatment and a part of their own healing.

Health is a state of mind, body and spirit. By restoring their connection to nature, cannabis helps patients on all three levels.

Mothers and fathers report enhanced flexibility and an ability to identify the child's needs as those of a separate and unique individual.

Medications discontinued or reduced include Oxycontin, Norco, Percoset, Vicodin, Flexeril, Soma, Valium, SSRI antidepressants, and blood-pressure medications Norvasc and Hydrochlorothiazide.

Approximately 1% of my patients report reduced reliance or discontinuation of seizure medication by substituting Cannabis for Dilantin and remaining seizure free. Many of my Glaucoma patients no longer require their Timoptic drops and are able to maintain normal pressures with the use of Cannabis. Many of my patients who have lost hope in conventional pharmaceutical treatments report enhanced health, decreased pain, decreased depression and an overall sense of well-being despite chronic illness.

Unusual conditions successfully treated with cannabis?

Eczema, Psoriasis, and dermatitis of all types are being treated successfully. Also, skin reactions associated with Agent Orange.

Although it is not a medical condition per se, parenting problems are alleviated by the use of cannabis. Mothers and fathers report enhanced flexibility and an ability to identify the child's needs as those of a separate and unique individual. Parents are able to interpret the child's behavior in an age-appropriate manner. Improved communication leads to shared experience. The parent becomes present and the child benefits from the increased positive attention.

Many patients report that cannabis stimulates their interest in art, music, poetry, writing, and other creative endeavors. Insight is manifested by an ability to recognize one's place in the universe. Patients say cannabis makes them less self-centered and egocentric and more aware of the needs of other people. It makes them aware of how their own behavior affects other people and how they may be contributing to a negative interaction. Cannabis can be a useful adjunct in the marital-counseling process.

Comments re strains and dosage?

As a result of Prohibition, not enough information is available regarding strains and I don't feel comfortable making a comment on this subject.

Regarding delivery methods, I feel strongly that edible cannabis is underutilized. As noted in a previous communication (Spring 2006), oral ingestion involves processing by the liver, which minimizes the differences between strains. Oral ingestion is recommended for those seeking longterm relief from chronic physiological problems such as pain, glaucoma, diabetes, lupus, rheumatoid arthritis, and multiple sclerosis.

Just as patients who smoke cannabis learn to inhale as needed to achieve and maintain their desired effect, patients who use oral cannabis can employ an analogous titration process. If a patient is using a vegetable-oil extract, s/he calculates the amount needed to produce the desired effect without over-sedation (the "loading dose"). By determining how long it takes for the effect to come on and wear off, patients can schedule a

continued on next page

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subsequent "maintenance dose" to keep on an even keel.

The sedation that may be perceived as a negative side effect during waking hours is precisely the effect that chronic pain patients and others require for a good night's sleep.

Orally ingested cannabinoids can exert their effects for close to eight hours —adequate sleep for most patients— eliminating the need for a maintenance dose in the middle of the night.

The efficacy of cannabis applied topically as an ointment or tincture is similarly underrated. Dose is controlled by the individual monitoring the effects on the skin lesions being treated. My patients have had great success with using 1/4 cup of extracted cannabis oil in a hot bath for overall distribution, followed by localized applications to severely inflamed areas. Cannabinoids and possibly other healing components of the plant are absorbed directly through the skin; the anti-inflammatory properties are outstanding, reducing recovery time from injuries and promoting healing of lesions. Topical cannabis has also been used by my lupus patients and rheumatoid arthritis patients to increase the function of joints and decrease nodule formation. Many recipes are available for both vegetable-oil-based and rubbing-alcohol-based preparations.

Adverse effects?

The most significant negative reactions are due to fear of incarceration and the results of abuse by officers unwilling to honor California law.

Demographics?

My office does not compile this data, but I can generalize with some assurance that my patients are about two-thirds male and more than half are over 50 years old. They are predominately white, with the majority having completed high school and beyond. Those patients who are not disabled do not report problems getting and maintaining satisfactory employment. Most use Cannabis in the evening for relaxing and for chronic stresses and pains and are not under the influence during work hours.

ADHD patients?

ADHD diagnoses are misleadingly low. Many high-achieving, successful, adults use cannabis for other problems but in fact meet the criteria for an ADHD diagnosis. Most ADHD patients in my practice are teenagers with parental consent to substitute Cannabis for more dangerous and addicting drugs like Ritalin, Dexedrine, etc. These patients do much better with Cannabis, show marked improvement in appetite and sleep, and are more successful in school.

Substitute for alcohol?

More than half my patients express a preference for Cannabis over alcohol. Those who have been alcoholics as evidenced by DUI and other court proceedings find that substituting Cannabis for alcohol makes it much easier to remain sober. Ample research demonstrates that excessive alcohol use often results in domestic violence and motor vehicle accidents. This is not the case with Cannabis use from my experience.

Helen Nunberg, MD, MPH

(Santa Cruz), was a family practitioner for more than 20 years before getting a Master's Degree in Public Health in 2003. She began doing cannabis consultations in 2005 and became medical director of MediCann, a statewide chain of clinics. This report is based on a review of 1,800 patients' files drawn from nine MediCann clinics.

MEDICANN'S NUNBERG

Approvals issued to date >53,000
Previously self-medicating: 96%
Diagnostic Groups:

71% of patients report marijuana relieves or reduces chronic pain. Most common diagnoses in this group are low back pain, muscle spasm, neck pain, degenerative arthritis, and degenerative disc disease with radiculopathy.

29% use marijuana for mental health. Most common diagnoses: anxiety disorder, anxiety/depression, recurrent major depression, attention deficit disorder (ADD), situational stress, and post-traumatic stress disorder.

23% use for insomnia; of those, 38% have insomnia due to pain.

16% report relief of gastrointestinal symptoms, the most common being nausea, anorexia, abdominal pain, Hepatitis C, Irritable Bowel Syndrome, and gastroesophageal reflux.

9% use for migraine headache.

2% have HIV, 2% have cancer.

Side effects:

Dry mouth in 38%;

Pleasant change in mood or perception in 31% (not bothersome).

Hunger in 28% (may not be bothersome; improved appetite may be the reason for cannabis use).

Fatigue 9% (may not be bothersome; improved sleep may be reason for use).

Cough 8%

Problem with memory 4%

Mental slowness 3%

Demographics:

73% male.

Mean age: 38 years old

Age range 14 - 83

Substance Abuse:

12% of patients report using marijuana to not use alcohol or other drugs that affected them adversely. Our physicians make the diagnosis of alcohol or drug dependency in remission in 2% of patients

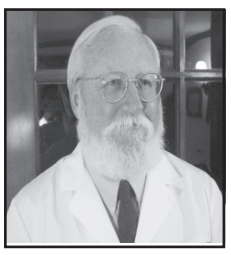
Prescription Drug Substitution:

This is very significant.

51% of the 1800 patients report using cannabis as a substitute for prescription medications; 48% report using cannabis to prevent prescription medication side effects; 67% report using cannabis to reduce dosage of prescription medication; 49% of patients using cannabis for chronic pain were previously prescribed an opioid (such as hydrocodone) by their personal physician.

Philip A. Denney, MD

(Redding, Lake Forest, Carmichael), spent most of his career as a family practitioner before specializing in cannabis consultations in 1999.



Aware that patients from all over the state were coming to see him in an office near Sacramento, Denney expanded his practice in 2004, opening offices in Orange and Shasta counties (in partnership with Robert Sullivan, MD, whose separate response is on page 8).

Approvals issued: 18,900
Previously self-medicating: 95%
Conditions being treated:

Chronic pain 50% (trauma, surgical, neuropathic, etc.) Cannabis works particularly well for neuropathic pain.

Gastrointestinal conditions 15% (nausea, vomiting, Crohn's disease, hepatitis C, etc.).

Psychiatric conditions 15% (anxiety, depression, bipolar disorder, PTSD, etc.).

Neurologic disorders 10% (multiple sclerosis, plegias, phantom pain, migraine, etc.).

Others 10%. Most common among these are glaucoma, addiction, and sleep disorders.

Results reported: Cannabis is nontoxic and therefore quite safe. Dosing is easy, involving self-titration, and there is no "hangover" effect. We do not see any dependence or abuse problems.

Medications reduced:

Cannabis allows significant decreased use or elimination of many prescription medications, particularly narcotics. Patients usually report decreases of 50% or better.

Rare conditions being treated?

Many, including anorexia and other eating disorders, and rare cancers such as pheochromocytoma. I am particularly impressed with the usefulness of cannabis in Tourette's Syndrome.

Comments re strains and dosage?

There are virtually no pure Sativa or Indica strains being used by California patients because of longterm cross-breeding. Nor can we subject strains in use to chemical analysis to determine their components.

The Sativa type is reportedly better for appetite and to alleviate gastrointestinal symptoms. It has mild stimulant effects, elevating mood and increasing activity.

The Indica type is preferred by patients for pain, spasm, sleep, and mania.

Dosage varies widely. Approximately 80% of patients use one ounce per week or less; 20% use more. Patients ingesting via edibles or teas tend to use more. The highest use among my patients is three ounces per week.

Demographics data:

Not kept. Average age approximately 40 years. 75% male, 25% female.

Approval for ADHD?

A relatively common diagnosis, particularly in younger males.

Cannabis as a substitute for alcohol:

Patients frequently report success in using cannabis to maintain sobriety. It is also used by many as a substitute for opiates and stimulants. Cannabis is an underused treatment for substance abuse.

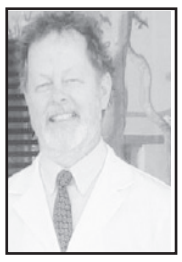
Overdose from edible cannabis —an unpleasant drowsiness lasting six to eight hours— is rare and transient.

Adverse effects?

Virtually none reported by patients except contacts with the legal system. Patients are able to stop using easily in order to pass drug tests or when traveling. Overdose from edible cannabis —an unpleasant drowsiness lasting 6-8 hours— is rare and transient.

Robert Sullivan, MD

(Redding, Sacramento, Lake Forest), has specialized in cannabis consultations in partnership with Dr. Denney since March 2004. Sullivan spent more than 20 years practicing Emergency Medicine.



Approvals issued: 6,000
Previously self-medicating: 98%
Conditions treated:
Pain (back, 50%; neck, 20%; other 20%)
Insomnia 30%
Depression 15%
GI, anorexia 10%
Migraine, other headache 10%
Hepatitis C 6%
Bipolar disorder 5%
Asthma 4%
Neuropathic pain 4%
HIV 3%
Lupus 3%
MS 3%
Seizures 1%
Harm reduction 1%

Results reported:

All patients seen for renewals report improvement —symptoms stable or relieved; 70% much improved —able to reduce intake of other medications, better able to handle problems. 85% report improvement in work and/or home life and general happiness.

Cannabis works therapeutically by treating present symptoms and prophylactically by preventing onset of symptoms.

Drug use reduced: Opiates, muscle relaxants, antidepressants, hypnotics (for sleep), anxiolytics, neurontin, anti-inflammatories, anti-migraine drugs, GI meds, prednisone (for asthma, arthritis).

Unusual conditions:

• Paroxysmal Atrial Tachycardia. Two patients refractive to conventional therapy. Both did their own experiments (using and then not using cannabis) to confirm efficacy.

• Morgellan's Disease— One patient reported successfully treating the symptoms of this mysterious condition, often dismissed as psychogenic. Possibly related to Borrelliosis (Lyme Disease). Symptoms include black dots on skin with blue or red "fibers" sticking out, scarring, itching, sensation of skin crawling, mood disorders, choronic fatigue, generalized aches, hair loss and headaches. In the reported case, Cannabis signficantly helped decrease symptoms and increase functioning.

• Attention Deficit Disoder (AD/HD) is not that unusual in my practice. That cannabis enhances the ability to focus is not that well known in public discussion.

• Hypertension— Cannabis helped enough to reduce other medications.

Comments re strains and dosage:

Changing strains helps postpone tolerance. High-dosage patients are more likely to develop tolerance. I leave the characterization of effects of specific strains to cannabis dispensaries and patients, but feel this is an extremely important step.

Adverse reactions?

None common (c. 1%), none "serious." Weight gain, tolerance, anxiety (related to potential theft from an outdoor garden), dry mouth, short-term memory decrease, anxiety, red eyes. All described in response to my inquiry (not spontaneous). None resulted in stopping cannabis use.

Demographics (estimates):

Gender: Male 75%, Female 25%

Age: 40-60 years old 60%

20-40 33%

>60 5%

<20 2%

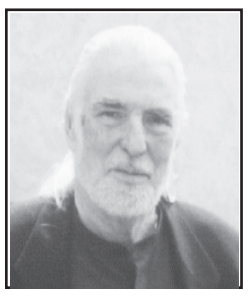
Ethnicity: Caucasian (gringo) 64%, Hispanic 30%, Black 4%, Asian 2%

Economic status: Very poor 10%, Working poor 27%, Working/middle class 50%, Well off 10%, Very wealthy 3%.

Approximately 8-10% of my patients are "officially" disabled by criteria of Medicare, California, or the military.

Medical Marijuana in California, 1996-2006 *from previous page*

Tom O'Connell, MD (Oakland) had a successful career as a thoracic surgeon, including 13-years in the U.S. Army. In 2001 he came out of retirement to conduct cannabis consultations. He soon concluded that there was pressure on patients to emphasize somatic rather than psychiatric problems, and designed his interview to evoke more thorough responses.



Approvals issued? >4,000

Percentage already self-medicating?

All but a few were using at the time of their initial interview —and they had used previously. Number of truly naive patients: zero.

Conditions being treated?

Patients are self-medicating to treat symptoms. The most common are

Stress, anxiety, and dysphoria (>90%)

Insomnia, chronic or recurrent (90%)

Pain, chronic or recurrent, from various sources (50%)

Inability to eat breakfast (40-50%)

Migraine (10-15%)

Other common conditions (2-5%) include Irritable Bowel Syndrome, Fibromyalgia, Seizure disorder, GERD, Diabetes (type 1 and 2) and Viral hepatitis C. (Most hepatitis patients were not sick enough to be treated. For those completing treatment, cannabis was extremely helpful in allowing them to tolerate the troublesome side effects of Interferon.)

Of the named condition they have been treated for by conventional medicine:

1) bipolar disorder 20-30%

2) ADD 15%

3) some form of anxiety disorder 15%

4) excessive drinking 10%

Results reported?

Cannabis is very safe, reliable, and durable over the long haul.

Medications reduced/discontinued?

Vicodin and other opioids; lithium; Klonopin; various sleep aids; and the whole gamut of psychotropic medications from Prozac to Xanax.

I don't tell patients to stop taking anything, but I will suggest they discuss it with the prescribing doctor. I have the feeling that most don't.

Out of the ordinary conditions?

I have encountered many unusual situations in which (now very familiar) symptoms were eventually treated successfully with cannabis.

Comments re strains and dosage?

Some patients are very knowledgeable about strains and dosages; most are not. The same with cannabis history and other aspects of lore. The majority are only vaguely aware that there IS a reform movement and know almost nothing of the politics. That "reform" doesn't speak for them is clear to me.

Demographics

Patients by Birth Cohort

Prior to 1945:	4.5%
1946-1955:	14.8%
1956-1965:	17.0%
1966-1975:	26.5%
1976-1985:	35.5%
1986 & up:	1.0%

"Reform" groups should acknowledge that cannabis use by adolescents is widespread and sustained. Instead of

"Reform" groups should acknowledge that cannabis use by adolescents is widespread and sustained.

ignoring the phenomenon (which seems to embarass them) they should try to understand and explain it. Then, when the media shows seemingly able-bodied young men patronizing cannabis clubs, people won't be so shocked and disapproving.

Comments re strain and dosage:

Some patients are apparently far more sensitive to, and knowledgeable about, strain and dosage differences.Virtually all who admit smoking in the morning ("wake and bake") agree that they usually take fewer tokes at that time than they take later in the day.

Adverse effects?

The most common is the "paranoid" reaction, in which (characteristically) a user who is "high" develops the uncomfortable feeling that everyone he/she sees KNOWS they are high and is critical of them for it. It almost always occurs in a situation where the person may be forced to deal unexpectedly with the public. It certainly needs further study. In any event, patients deterred from using pot aren't lining up for approvals to do so.

ADHD patients?

About 20% of males have a cluster of symptoms suggestive of the syndrome. They tend to be morning cannabis users.

Cannabis as a substitute for alcohol?

Ten to 12 percent have made a conscious substitution. More than 90% reduced their alcohol intake once they became chronic users, which is the way I've chosen to look at the impact of cannabis on alcohol consumption.

There is a prevailing attitude —explicitly espoused by law enforcement— that physical symptoms are more "serious" and therefore more appropriate for treatment by cannabis than depression, anxiety, insomnia.

I see the severe alcoholic (multiple DUIs, multiple blackouts) as in a class apart. I recommend to all with that history that they scrupulously avoid alcohol. Ditto anyone with Hepatitis.

Cannabis consultants should bear in mind that if information about emotional problems isn't elicited, it won't be offered.

Cannabis consultants should bear in mind that if information about emotional problems isn't elicited, it won't be offered. Likewise, information about initiation and use of other drugs has to be specifically sought and patients have to be reassured that it's safe to divulge. There is a prevailing attitude —explicitly espoused by law enforcement— that physical symptoms are more "serious" and therefore more appropriate for treatment by cannabis than depression, anxiety, insomnia. This attitude has no basis in medicine or ethics, and should not be passively adopted by patients and doctors.

Readers are invited to check out Dr. O'Connell's blog, www.doctortom.org

Demographics of Proposition 215 Applicants

By Tom O'Connell, MD

When Congress rewrote the drug laws as the Controlled Substances Act (CSA) in 1970, marijuana was characterized as a harmful substance with no medical applications and placed on Schedule 1. California's Proposition 215 offered amnesty to residents of the state whose cannabis use was deemed beneficial to their health by a physician. It thus created a unique opportunity for clinical examination of a large population of cannabis users.

Since November 2001 I have interviewed some 4,000 patients pursuant to their application for a "medical" designation. I soon discovered that nearly all were chronic users who had first tried marijuana as adolescents. (Information about initiation and use of other drugs has to be specifically sought and patients have to be reassured that it's safe to divulge.)

Over a period of seven months, a protocol was created for systematically acquiring data which might shed light on two related questions: what, if any, were my patients' shared clinical characteristics, and for what symptoms had they been self-medicating?

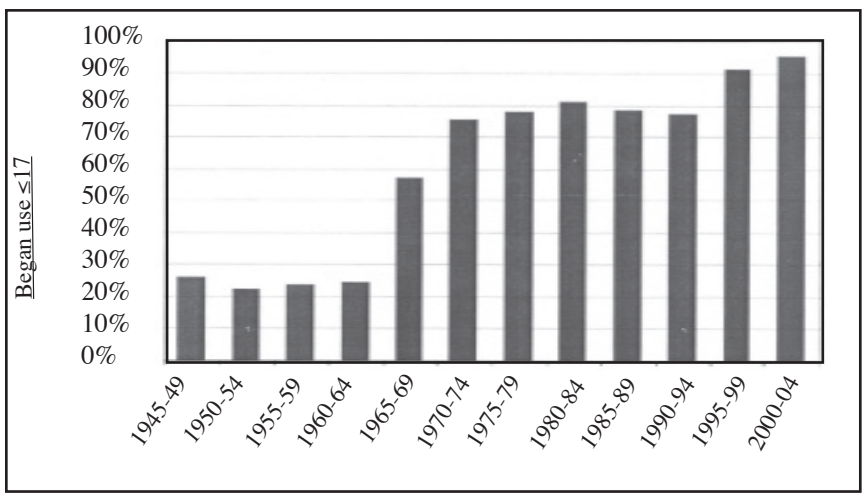
Dividing the applicants into cohorts based on their year-of-birth (YOB) yields a time-line of the the cannabis market that has been growing steadily since a "drug war" became U.S. national policy.

The first large cohort to use cannabis on a regular basis (14.8% of applicants) were "baby boomers" born between 1946 and 1955. They are now between 50 and 60 and many have been chronic users for three decades or longer. On the other hand, all cohorts born before 1946, which correspond to about 16% of the general population, account for only 4.8 % of medical cannabis applicants in my practice.

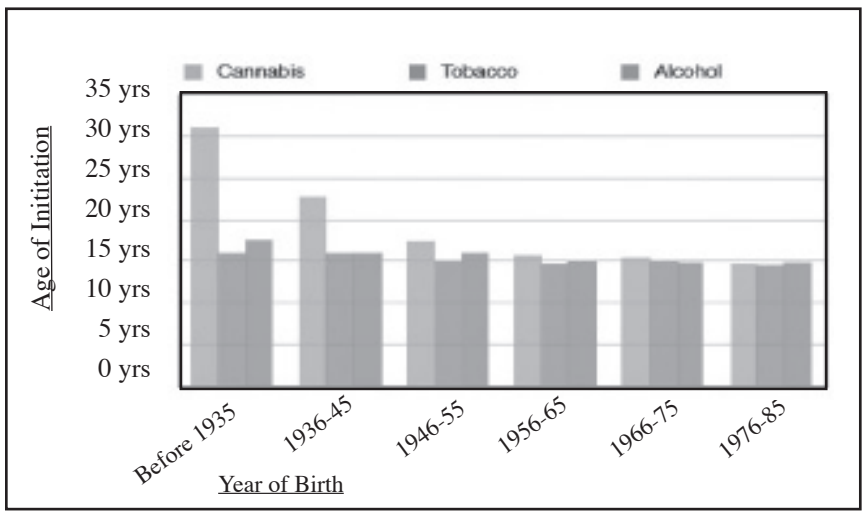
For this group, there was virtually no difference in the ages between which they first tried cannabis and the other entry level drugs, alcohol and tobacco.

American drug policy has been based largely on fear of addiction, yet addiction remains an incompletely understood entity which has never been precisely defined either clinically or pathologically. Is cannabis addictive? In my practice, 496/524 (94.6%) of randomly selected chronic users, asked if they had ever been completely abstinent for two weeks or longer, answered that they had, many for months or years. They had a variety of cogent reasons —being drug tested for a job application, probation, or the simple desire to see if they could get along without cannabis. None expressed the intensity of deprivation usually voiced by abstaining cigarette or morphine addicts.

As documented by annual surveys since 1976, at least half of all U.S. high school students have been trying cannabis before leaving school. My results suggest most, if not all, of those who became chronic users did so to treat a wide variety of both psychotropic and somatic symptoms. What remains unknown is the degree to which their profile is representative of the much larger "recreational" market.



Trend towards earlier initiation of Cannabis use is apparent when applicants for physician approval who began using before age 17 are grouped by year-of-birth cohort.



Age of initiating Cannabis, tobacco, and alcohol (bars from left to right) became almost equal in the decades since the U.S. began its "war on drugs."


An Illness That's Not Just for Kids Anymore

Drug Industry Targets Adults With Attention Disorder; The Shift to Inner Restlessness

By Robert McGeoch and Patricia Callard

A Disruptive Disorder

Cannabis, the Anti-Drug!

Implications of the 10-Year Survey

By Fred Gardner

Despite urging from Drs. Hergenrather, Lucido, and Mikuriya, their colleagues in the Society of Cannabis Clinicians never would adopt a common intake form. Thus the data they've collected from patients over the years cannot be neatly aggregated, and the survey published in this issue, "Medical Marijuana in California, 1996-2006," is crude indeed.

And yet it has a certain power. The recurrent findings and observations don't lose their validity because the doctors arrived at them from different angles. The presentation may not be sophisticated, but the content is substantial and real.

With few exceptions, only experienced users have availed themselves of the protection provided by Prop 215.

Approximately 160,000 patients have been authorized to use cannabis by some 30 MDs involved in the survey. In Oregon, where a 1998 voter initiative created a medical-marijuana program that tracks participants, an equivalent number of cannabis specialists have issued 45% of the approvals. By extrapolation we put the number of Californians who have become legal cannabis users since Prop 215 passed at around 350,000.

There are many confounding factors (Oregon doesn't recognize mood disorders as treatable by cannabis, for one). But the 350,000 figure is roughly confirmed by an analysis of approval letters filed with an agency that issues ID cards in California.

The SCC doctors whose practices are strictly cannabis-oriented all reported that 95% or more of their patients had been using the herb prior to seeking approval. The implication is that, with few exceptions, only experienced users have availed themselves of the protection provided by Prop 215. The Prohibitionists may have lost the election in 1996, but they've managed to keep millions of Californians in a state of suspended naivete about cannabis.

The anti-drug

The extent to which cannabis enables patients to reduce their intake of pharmacuetical and over-the-counter drugs is a consistent theme, starting with the lead author (Mikuriya), who states it simply: "Opioids, sedatives, NSAIDS, and SSRI anti-depressants are commonly used in smaller amounts or discontinued. These are all drugs with serious adverse effects."

Dr. Sullivan's list is a little more extensive: "Opiates, muscle relaxants, antidepressants, hypnotics (for sleep), anxiolytics, neurontin, antiinflammatories, anti-migraine drugs, GI meds, prednisone (for asthma, arthritis)."

Helen Nunberg, MD, of MediCann quantifies the trend: "51% of the 1,800 patients report using cannabis as a substitute for prescription medications; 48% report using cannabis to prevent prescription medication side effects; 67% report using cannabis to reduce dosage of prescription medication; 49% of patients using cannabis for chronic pain were previously prescribed an opioid (such as hydrocodone) by their personal physician."

Is it any wonder that the corporate drug manufacturers oppose legalization of cannabis for medical use? Cannabis is the anti-drug!

Reports of cannabis-using pain patients reducing their opioid intake by 50% jibe perfectly with studies showing that lab animals need half the opioids to achieve pain relief when also treated with a synthetic cannabinoid.

The extremely wide range of conditions for which cannabis provides relief is striking in itself and fits with what scientists have learned about the body's endocannabinoid system, which functions as a "retrograde messenger," setting the tone and tempo for other neurotransmitter systems like a conductor facing an orchestra.

Marijuana prohibition is part of a broader disconnect from nature that we, the people, have been sold in the name of progress.

Clinicians know that cannabis can enhance focus (like a stimulant, but without causing jitters) and, paradoxically, can bring on sleep. Research explains the paradox: the cannabinoid system works to achieve homeostasis —to inhibit neurons firing too intensely and to disinhibit neurons firing too sluggishly.

Cannabinoids perform this stay-on-an-even-keel role in systems that regulate appetite, movement, learning (and forgetting), perception of pain, immune response and inflammation, neuroprotection and other vital processes.

The SCC doctors express frustration that they don't know the cannabinoid contents of the strains their patients are using. All concerned wish that a high-CBD strain was available. The doctors would have learned a great deal in 10 years about how high-CBD cannabis differs from high-THC cannabis. Prohibition has impeded important research.

Adverse effects

What of the alleged adverse effects —including addiction— on which the marjuana prohibition rests? Dr. Denney's response puts it succinctly:"Virtually none reported by patients, except contacts with the legal system. Patients are able to stop using easily in order to pass drug tests or when traveling. Overdose from edible cannabis —an unpleasant drowsiness lasting six to eight hours— is rare and transient."

Dr. Lucido reports that "decreased productivity" caused two patients to stop using cannabis. But, he adds, " the overwhelming majority report that they are MORE productive when their symptoms are controlled with cannabis." U.S. employers please note.

The SCC patient population is biased, obviously —all but a small fraction felt in advance that cannabis helped them and were undeterred by any side effects. And those experiencing adverse effects might not return for renewed approvals. Nevertheless, the sheer number of patients whose experience is reflected in the survey —more than 150,000— and the absence of serious adverse effects as reported to other doctors, the media, and the medical board is remarkable. If common sense prevailed, cannabis would not be classed as a "dangerous" drug. Lexapro would.

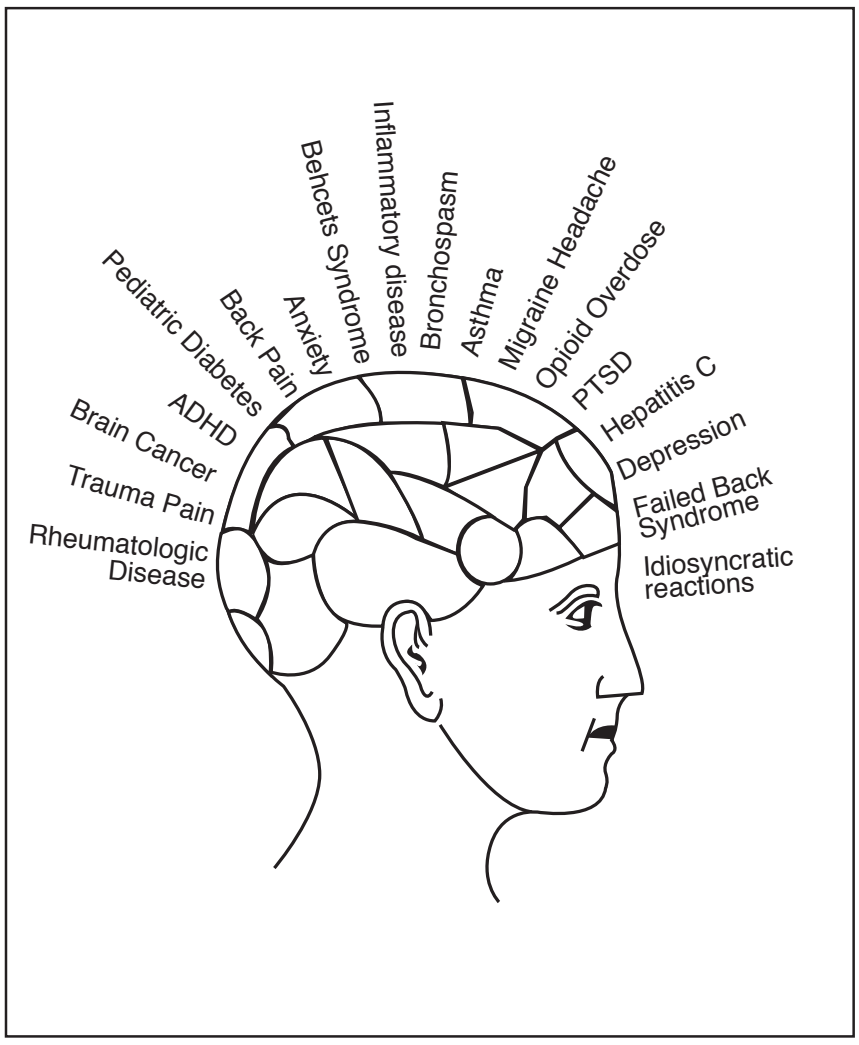
We need to start diagnosing the causes of our problems instead of just treating symptoms.

The War on Us

While the SCC doctors reported generally consistent findings, each had something special to add —an unusual illness treated, an original insight, a poignant generalization such as this one by Dr. Fry:"Health is a state of mind, body and spirit; by restoring their connection to nature, cannabis helps patients on all three levels."

Marijuana prohibition is part of a broader disconnect from nature that we, the people, have been sold in the name of progress. Synthetic pharmaceuticals are said to be "pure," even though their side-effects can be horrific unto death. A tremendous sales force is in place to promote their use and suppress the competition. In the U.S. today, the medical establishment and government itself are extensions of the corporate sales force.

America needs more farmers and fewer sales people. And we need to start diagnosing the causes of our problems instead of just treating symptoms.



Conditions for which Cannabis helped patients (left) and pharmaceutical products they were able to cut back on or stop using entirely.

Illustration by Chris Blum (Knowbodies.biz)