

**P C MAT TRAINING**  
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For Medication Assisted Treatment

## Opioid Agonist Therapy: The Duration Dilemma

Edwin A. Salsitz, M.D., FASAM  
Mount Sinai Beth Israel  
March 10, 2015

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### Presenter Disclosures

- Edwin A. Salsitz, M.D. has no financial relationships with an ACCME defined commercial interest.

*The contents of this activity may include discussion of off label or investigative drug uses. The faculty is aware that it is their responsibility to disclose this information.*

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### OUTLINE

- History and Evolution of Opioid Agonist Therapy(OAT)
- Evidence of Effectiveness of Maintenance
- Safety Issues
- Methadone Medical Maintenance (OBOT)
- Stigma Issues
- Barriers to Long Term Maintenance
- Conclusions
- Discussion

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**Treatment of Opioid Addiction**

- Medication Assisted: Therapy, Treatment, Recovery
- Opioid Full/Partial Agonist Therapy (OAT): Methadone, Buprenorphine, (LAAM)
- Opioid Antagonist Therapy: Naltrexone Tablets and Depot I.M. Injection
- Medication Plus Psychosocial--Optimal
- Drug Free Recovery--"Abstinence Based"
- Mutual Help, CBT, DBT, MI, etc.

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**MEDICATION ASSISTED ADDICTION TREATMENT**

"All Treatments Work For **Some** People/Patients"  
 "No One Treatment Works for **All** People/Patients"

**Alan I. Leshner, Ph.D**  
 Former Director NIDA

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**MEDICATION ASSISTED ADDICTION TREATMENT**

For Emphasis and Clarity,  
 Please Allow Me to Repeat:

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**MEDICATION ASSISTED ADDICTION TREATMENT**

“All Treatments Work For **Some** People/Patients”  
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**My Treatment “Bias”**

AGONIST                      ANTAGONIST



Courtesy A.W.

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**Webinars; PCSS-MAT, PCSS-O**

- Drs. Bisaga and Sullivan: Naltrexone, PCSS-MAT 7/21/14, 1/13/15
- Dr. David Fiellin: Buprenorphine, PCSS-O 12/15/14
- Dr. Judith Martin: Methadone, PCSS-O 1/21/15
- Dr. Kevin Sevarino: Neuroadaptations to Opioids, PCSS-MAT 10/9/14
- Dr. Daniel Alford: Managing Acute and Chronic Pain in Patients Maintained on OAT, PCSS-MAT 8/12/14

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### George Santayana 1863-1952

- “Those who do not remember the past are condemned to repeat it.”

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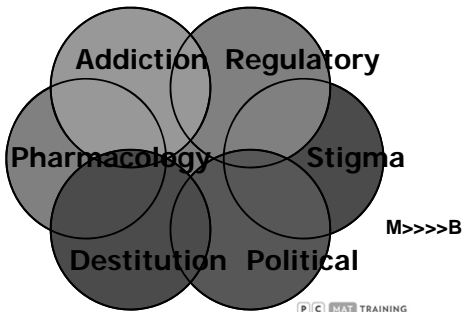
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### OPIOID AGONIST THERAPY (OAT)



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### The Lexington Narcotic Farm



The first facility opened on May 25, 1935, outside Lexington, Ky. The 1,050-acre site included a farm and dairy, working on which was considered therapeutic for patients. Morphine and methadone for w/d Rx. With the increased availability of state and local drug abuse treatment programs, The hospital was closed in February 1974.

**\*RELAPSE\***  
Drs. Kolb, Himmelsbach, Wikler, Jaffe, Kleber, Vaillant

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### Drs. Dole, Nyswander, and Kreek



Courtesy Dr. Vincent Dole  
Dr. Vincent Dole and Dr. Marie Nyswander  
Methadone Pioneers



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### Initial Publication

#### A Medical Treatment for Diacetylmorphine (Heroin) Addiction

A Clinical Trial With Methadone Hydrochloride  
Vincent P. Dole, MD, and Marie Nyswander, MD

A group of 22 patients, previously addicted to diacetylmorphine (heroin), have been stabilized with oral methadone hydrochloride. This medication appears to have two useful effects: (1) relief of narcotic hunger, and (2) induction of sufficient tolerance to block the euphoric effect of an average illegal dose of diacetylmorphine.

ough review of evidence available in 1957, concluded that "The advisability of establishing clinics or some equivalent system to dispense opiates to addicts cannot be settled on the basis of objective facts. Any position taken is necessarily based in part on opinion, and on this question opinions are

JAMA Classics: Celebrating 125 Years  
Methadone Maintenance 4 Decades Later  
Thousands of Lives Saved But Still Controversial!  
Commentary by Herbert D. Kieber, MD  
JAMA. 2008;300(19):2303-2305

JAMA. 1965;193(8):646-650

From the Rockefeller Institute, and Manhattan General Division of Beth Israel Hospital, New York.  
Reprint requests to Rockefeller Institute, New York 10021 (Dr. Dole).

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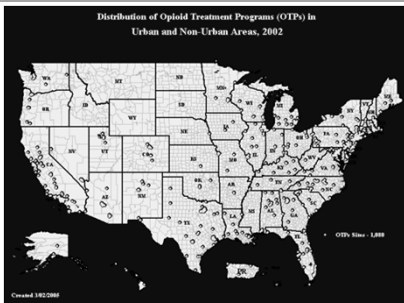
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### Distribution of Opioid Treatment Programs (OTPs) 2002



SAMHSA/CSAT  
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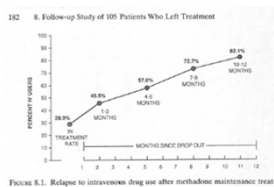
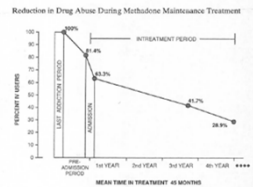
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### "The Effectiveness Of Methadone Maintenance Treatment," Ball and Ross, 1991

Comprehensive Study of 6 Methadone Clinics in NYC, Philadelphia, and Baltimore  
Objective: "Open the Black Box of Methadone Maintenance Treatment"  
N=617 patients over 7 Years



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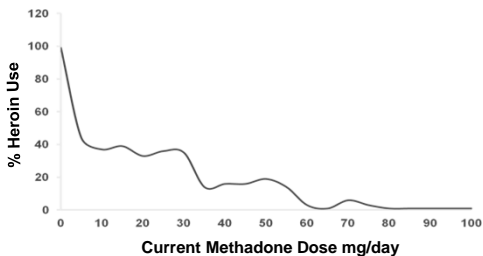
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### Recent Heroin Use by Current Methadone Dose



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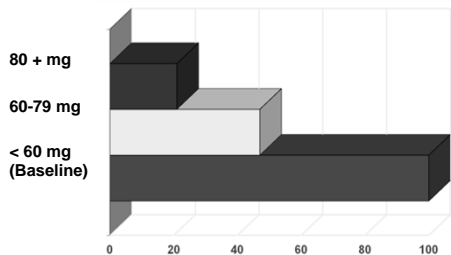
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### Retention in Treatment Relative to Dose Relative Risk of Leaving Treatment



Adapted from Coplehorn & Bell

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U.S. Department of Health & Human Services • National Institutes of Health  
**NIH Consensus Development Program**

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### Effective Medical Treatment of Opiate Addiction

National Institutes of Health  
 Consensus Development Conference Statement  
 November 17-19, 1997

Conclusions:  
 "...inform the public that dependence is a medical disorder that can be effectively treated with significant benefits for the patient and society."

Expand Access to MMT  
 CJS  
 Education of Providers  
 ↓ Regulations  
 ↑ Funding  
 Parity with all medical/psych disorders  
 Pregnancy  
 ↑ Minority Involvement

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## DATA 2000: Buprenorphine

- Major Paradigm Shift: OBOT vs MMTP
- Mechanism of Action: Similar to methadone
- Partial Agonist: Safety Implications
- 12 years of use in USA
- Now, more patients treated with Bupe than methadone
- Some of the same issues developing:
  - Diversion, Misuse, Abuse**
  - Dosage
  - Duration
  - Other Drug Use Disorders
  - Access
  - Insurance Coverage, Prior Authorizations

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## Mortality in heroin addiction: impact of methadone treatment

Grönblad L, Östlund IS, Ganne LM. Mortality in heroin addiction: impact of methadone treatment. Acta Psychiatr Scand 1990; 83: 223-227.  
 L. Grönblad, L. S. Östlund, L. M. Ganne  
 Department of Psychiatry, Uppsala, Sweden

p < 0.0001

Years	Untreated controls (%)	MT + Vol. discharge (%)
0	100	100
2	90	100
4	75	100
6	60	98
8	55	95

Fig. 2. Survivors in cohorts 1 + 2 (solid line) compared with controls (dotted).

Years	Untreated controls (%)	Cohort 3 (Vol. discharge, lower) (%)	Cohort 2 (Vol. discharge, upper) (%)
0	100	100	100
2	90	98	100
4	75	85	98
6	60	75	95
8	55	70	92

Fig. 3. Cohort 2 (voluntary discharge; upper solid line) contrasted to cohort 3 (voluntary discharge; lower solid line) and controls (dotted line).

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**Methadone Maintenance vs 180-Day Psychosocially Enriched Detoxification for Treatment of Opioid Dependence**  
A Randomized Controlled Trial

Karen L. Sees, DO  
Kevin L. Delacchi, PhD  
Carmen Mason, PhD  
Amy Burns, PhD  
H. Wesley Clark, MD  
Heleen Robillard, RN, MSN, MA  
Peter Evans, MD  
Sharon M. Hill, PhD

**Context:** Despite evidence that methadone maintenance treatment (MMT) is effective for opioid dependence, it remains a controversial therapy because of its indefinite provision of a dependence-producing medication.

**Objective:** To compare outcomes of patients with opioid dependence treated with MMT vs an alternative treatment, psychosocially enriched 180-day methadone-avoided detoxification.

**Design:** Randomized controlled trial conducted from May 1999 to April 1999.

**Setting:** Research clinic in an established drug treatment service.

**Patients:** Of 808 volunteers screened, 179 adults with diagnosed opioid depen-

JAMA 2000;283:1303-1310

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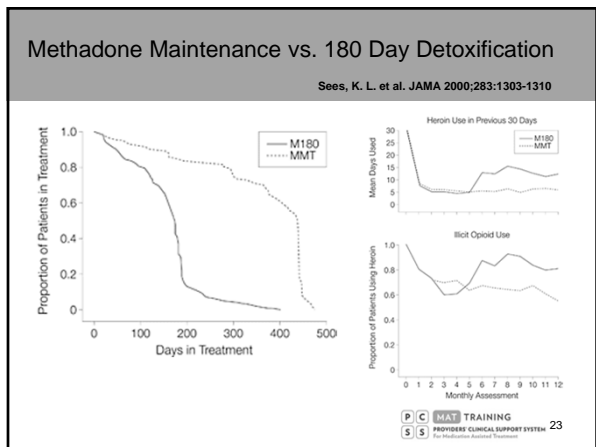
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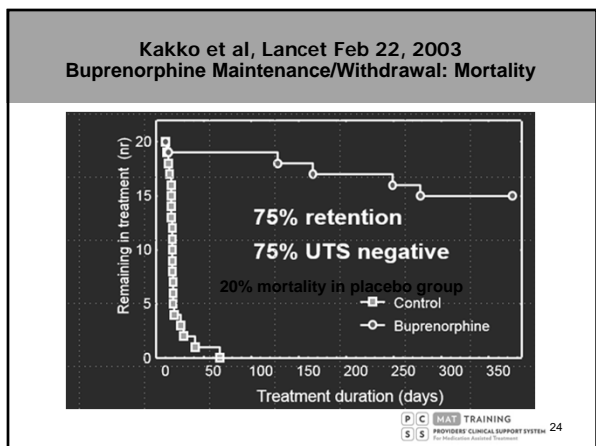
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## POATS Study

ORIGINAL ARTICLE

ONLINE FIRST

### Adjunctive Counseling During Brief and Extended Buprenorphine-Naloxone Treatment for Prescription Opioid Dependence

A 2-Phase Randomized Controlled Trial

Roger D. Weiss, MD, Jennifer Skarpe Foster, PhD, David A. Furrin, MD, Marilyn Byrne, MSW, Mary S. Conroy, MD, PhD, William Dubson, DO, John Gardner, PhD, Margaret L. Griffin, PhD, Marc N. Gourevick, MD, MPH, Deborah L. Haller, PhD, Albert L. Hanson, MD, Zhen Huang, MD, Petra Jacobs, MD, Andrew S. Krasinski, PhD, Robert Lindblad, MD, Elmore F. McCance-Katz, MD, Scott E. Pincus, MD, Jeffrey Schorr, MD, Eugene C. Smezza, MD, PhD, Susan C. Stone, PharmD, Walter Ling, MD

**Table 2. Successful Opioid Use Outcome by Counseling Condition (SMM vs SMM + OOC) at 3 Time Points**

Time Point	Observed, No./Total No. (%) [95% CI]		GEE Model-Based Results	
	SMM	SMM + OOC	OR (95% CI) <sup>a</sup>	P Value
End of phase 1	24/31 (77) [59-93]	19/23 (83) [65-95]	1.3 (0.7-2.4) <sup>b</sup>	.26
Phase 2, end of treatment	24/31 (77) [59-93]	20/18 (111) [81-131]	0.8 (0.5-1.2) <sup>c</sup>	.27
Phase 2, 8-wk posttreatment follow-up	13/18 (72) [51-92]	18/19 (95) [80-100]	0.7 (0.3-1.3) <sup>d</sup>	.22

Abbreviations: GEE, generalized estimating equation; OOC, opioid dependence counseling; OR, odds ratio; SMM, standard medical management.  
<sup>a</sup>The reference category is SMM + OOC.  
<sup>b</sup>Adjusted for chronic pain at baseline and lifetime history of heroin use.  
<sup>c</sup>Adjusted for chronic pain at baseline, lifetime history of heroin use, and phase 1 randomization.  
<sup>d</sup>Adjusted for chronic pain at baseline, lifetime history of heroin use, and phase 1 randomization.

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## Buprenorphine Maintenance vs Taper Prescription Opioid Use Disorder

Figure 2. Treatment Retention and Mean Buprenorphine Dosage for Patients With Prescription Opioid Dependence

Mean buprenorphine dosage, mg/d

Time in Study, wk	Maintenance condition	Taper condition
1	14.9	15.1
2	15.1	15.2
3	15.3	15.3
4	15.9	16.0
5	16.2	16.2
6	16.2	16.4
7	16.6	16.8
8	16.2	16.2
9	16.2	16.2
10	16.2	16.2
11	16.2	16.2
12	16.2	16.2
13	16.2	16.2
14	16.2	16.2

Results: Completion of 14 week trial: taper 11% vs maintenance 66%  
 Mean percentage of urine negative for opioids: taper 35% vs maintenance 53%

Fiellin DA et al. JAMA Intern Med 2014

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## Methadone: Back to the Future

The Lancet - Saturday 8 September 1979

**DOUBLE-BLIND COMPARISON OF METHADONE AND BUPRENORPHINE TREATMENTS FOR OPIOID-DEPENDENT SUBJECTS IN BRISTOL**

**Patients and Methods**

100 patients were selected on a non-urgent basis, average methadone dose 100 mg/day.

1. Randomized trial of buprenorphine for a two-hour period of acute pain relief.

2. Randomized trial of buprenorphine for a two-hour period of acute pain relief.

3. Randomized trial of buprenorphine for a two-hour period of acute pain relief.

4. Randomized trial of buprenorphine for a two-hour period of acute pain relief.

5. Randomized trial of buprenorphine for a two-hour period of acute pain relief.

6. Randomized trial of buprenorphine for a two-hour period of acute pain relief.

7. Randomized trial of buprenorphine for a two-hour period of acute pain relief.

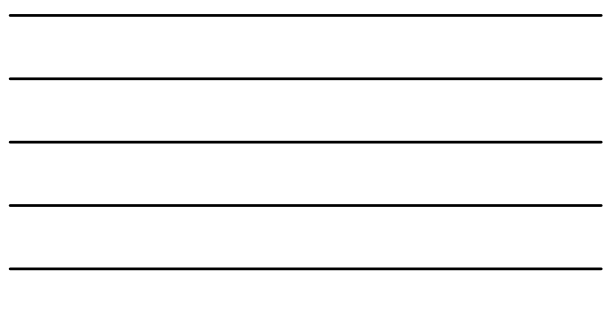
8. Randomized trial of buprenorphine for a two-hour period of acute pain relief.

9. Randomized trial of buprenorphine for a two-hour period of acute pain relief.

10. Randomized trial of buprenorphine for a two-hour period of acute pain relief.

Fig. 1—Proportion of subjects retained in study. Admissions to the study occurred over 7 months; at least 128 weeks elapd between admission of last subject and conclusion of the study.

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### Buprenorphine: Recurrent Relapse

30 yo male. Buprenorphine was effective. Significant psychosocial problems, including high stress job, and many co-workers misusing prescription oxycodone. Unable or unwilling to access counseling, and dispute with wife over maintenance paradigm. Advised to return for treatment. Lost to F/U.

	End	Start				
MICHAEL	7/22/79	Suboxone 8mg qd	7/23/10	7/19/09	XXX drop out 1	oxycodone, arycantin
MICHAEL 2	7/22/79	Suboxone 8mg qd Film	7/16/11	4/12/11	XXX drop out 2	Relapse oxycodone IR ER
MICHAEL 3	7/22/79	Suboxone 12 mg Film	7/21/12	7/22/11	XXX drop out 3	Relapse oxycodone IR ER
MICHAEL 4	12/22/1979	Suboxone 12mg Film	5/13/2012	4/13/2012	XXX drop out 4	Relapse oxycodone IR ER

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### Buprenorphine: Dosage Issue

**Addiction**  
RESEARCH REPORT

Treatment retention among patients randomized to buprenorphine/naloxone compared to methadone in a multi-site trial

Yi-Jing Shen<sup>1</sup>, Andrew J. Saxon<sup>2</sup>, David Huang<sup>3</sup>, Al Hassan<sup>4</sup>, Christina Thomas<sup>5</sup>, Maureen Hillhouse<sup>6</sup>, Peter Jacobs<sup>7</sup>, Cheryl Teruya<sup>8</sup>, Paul McLaughlin<sup>9</sup>, Katarina West<sup>10</sup>, Alan Cohen<sup>11</sup> & Walter Ling<sup>12</sup> 2013

Review  
 Buprenorphine maintenance and  $\mu$ -opioid receptor availability in the treatment of opioid use disorder: Implications for clinical use and policy  
 Mark K. Greenwald<sup>1,2,\*</sup>, Sandra D. Comer<sup>3</sup>, David A. Fiellin<sup>4</sup>  
 Drug and Alcohol Dependence, 144, 2014

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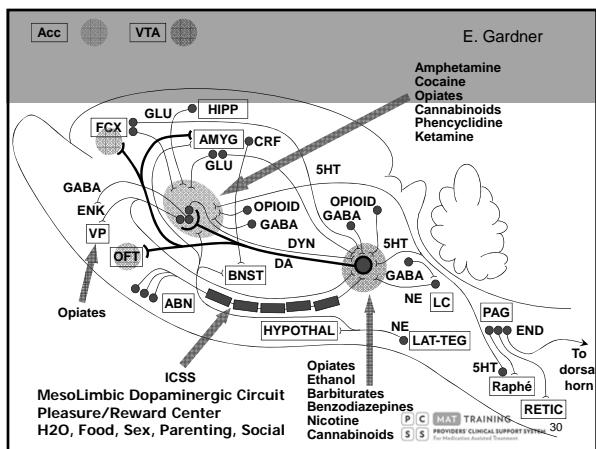
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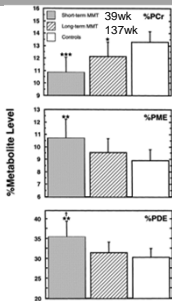
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### Methadone: Effectiveness/MOA

Cerebral phosphorus metabolite abnormalities in opiate-dependent polydrug abusers in methadone maintenance



Psychiatry Research: Neuroimaging Volume 90, Issue 3, 30 June 1999, Pages 143-152 Kaufman, M

#### Phosphorous MR Spectroscopy

Fig. 3. Metabolite levels in control subjects (n=16) and in short- (n=7) and long-term (n=8) methadone maintenance treatment (MMT) subgroups. Shown are means±S.D. of percent metabolite measures.

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### Methadone: Effectiveness/MOA

From these data, we conclude that polydrug abusers in MMT have 31P-MRS results consistent with abnormal brain metabolism and phospholipid balance. **The nearly normal metabolite profile in long-term MMT subjects suggests that prolonged MMT may be associated with improved neurochemistry.**

Psychiatry Research: Neuroimaging Volume 90, Issue 3, 30 June 1999, Pages 143-152

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### Methadone: Effectiveness/MOA

Article

#### Acute Effect of Methadone Maintenance Dose on Brain fMRI Response to Heroin-Related Cues

Daniel D. Langleben, M.D.  
Kosha Ruparel, M.S.E.  
Igor Elman, M.D.  
Samantha Busch-Winokur, B.A.  
Ramapriyan Pratiwadi, B.S.E.  
James Loughhead, Ph.D.  
Charles P. O'Brien, M.D., Ph.D.  
Anna R. Childress, Ph.D.

**Objective:** Environmental drug-related cues have been implicated as a cause of illicit heroin use during methadone maintenance treatment of heroin dependence. The authors sought to identify the functional neuroanatomy of the brain response to visual heroin-related stimuli in methadone maintenance patients.  
**Method:** Event-related functional magnetic resonance imaging was used to compare brain responses to heroin-related stimuli and matched neutral stimuli in 25 patients in methadone maintenance treatment. Patients were studied before and after administration of their regular daily methadone dose.

**Results:** The heightened responses to heroin-related stimuli in the insula, amygdala, and hippocampal complex, but not the orbitofrontal and ventral anterior cingulate cortices, were acutely reduced after administration of the daily methadone dose.  
**Conclusions:** The medial prefrontal cortex and the extended limbic system in methadone maintenance patients with a history of heroin dependence remains responsive to salient drug cues, which suggests a continued vulnerability to relapse. Vulnerability may be highest at the end of the 24-hour interdose interval.

(Am J Psychiatry 2008; 165:330-334)

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## Methadone: Effectiveness/MOA

Figure 1. Activation Maps of Brain fMRI Response to Heroin-Related Stimuli in Methadone Maintenance Patients Before and After Daily Methadone Dose.  
Am J Psychiatry 2008; 165:390-394

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## Duration: Potential “Pleiotropic” Benefits

**TABLE 3. Stress Response Hormones**

	HPA AXIS	
	Adrenocorticotropic hormone	Cortisol
Short-acting opiates	↓	↓
Opiate withdrawal	↑	↑
Methadone	↔	↔
Buprenorphine	↔	↔
Naltrexone (oral)	↑	↑
Naltrexone (extended release)	↓	↓

↑ = stimulate; ↓ = suppress; ↔ = no change.

Gavin Bart MD, FACP, FASAM  
(2012) Maintenance Medication for Opiate Addiction: The Foundation of Recovery, Journal of Addictive Diseases, 31:3, 207-225.

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## Prevalence of HIV-1 (AIDS Virus) Infection in Intravenous Drug Users New York City: 1983 - 1984 Study: Protective Effect of Methadone Maintenance Treatment

**50 – 60%**

Untreated, street heroin addicts:  
Positive for HIV-1 antibody

**9%**

Methadone maintained since <1978  
(beginning of AIDS epidemic):  
less than 10% positive for HIV-1 antibody

Kreek, 1984; Des Jarlais et al., 1984; 1989

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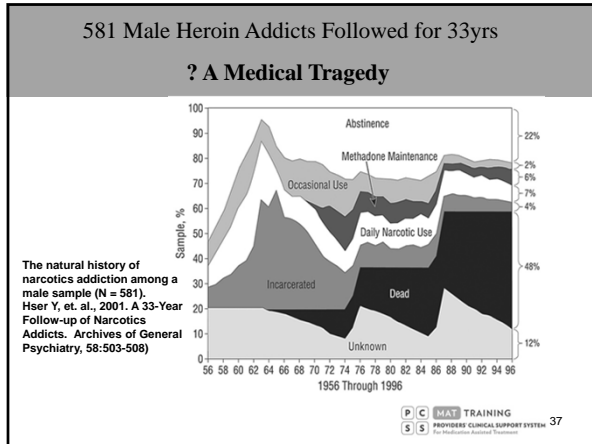
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- ### Hser Y, et. al., 2001. A 33-Year Follow-up of Narcotics Addicts. Archives of General Psychiatry, 58:503-508
- California cohort of heroin addicted males-CJS
  - After 15 years of abstinence, 25% relapsed to heroin
  - Participation rates in methadone maintenance were <10% in any given year
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## Relapses

- May be delayed and gradual
- ODs and OD death, e.g., fentanyl contamination
- Relationships
- Employment
- Child Custody
- Criminal Justice System
- New Infectious Agent
- Shame and guilt
- Etc.

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## Duration: Safety

Drug and Alcohol Dependence, 33 (1992) 235-245  
Elsevier Scientific Publishers Ireland Ltd.

235

### The medical status of methadone maintenance patients in treatment for 11-18 years

N=111

David M. Novick<sup>a,b</sup>, Beverly L. Richman<sup>a</sup>, Jeffrey M. Friedman<sup>a</sup>, Jacqueline E. Friedman<sup>a</sup>, Christine Fried<sup>a</sup>, Janifer P. Wilson<sup>a</sup>, Anita Townley<sup>a</sup> and Mary Jeanne Kreek<sup>a</sup>

<sup>a</sup>The Rockefeller University, New York, NY 10021 and <sup>b</sup>Department of Medicine and <sup>c</sup>Methadone Maintenance Treatment Program, Cook County Medical Center, New York, NY 10008-0204

(Accepted April 7, 1992)

As compared to active IV heroin users the methadone patients gained weight, and had less sexual dysfunction, Chronic liver disease was common, and antedated methadone treatment. **"No clusters of unusual medical complications were observed."** (EKGs not done)

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## OAT Duration: Safety

- Avoid OD: Induction Methadone Deaths → Pain Rx
- Drug/Drug Interactions: M>B
- Constipation
- Sweating
- Secondary Hypogonadism; ?M>B
- QTc Prolongation: M
- Other: Nausea, arousal, sedation, etc.
- No Organ Damage: Compare to Alcohol, Cocaine and Tobacco
- "Rots Teeth and Bones:" An enduring myth

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## Medical Maintenance: 1983--Present

### Methadone Maintenance Patients in General Medical Practice

#### A Preliminary Report

David M. Novick, MD, Emil F. Paccarelli, MD, Herman Joseph, Edwin A. Saksitz, MD, Beverly L. Richman, MD, Don C. Des Jarlais, PhD, Mary Anderson, MS, Vincent P. Dole, MD, Marie E. Nysswander, MD

Medical maintenance is the treatment by primary care physicians of rehabilitated methadone maintenance patients who are stable, employed, not abusing drugs, and not in need of supportive services. In this research project, physicians with experience in drug abuse treatment provided both the pharmacologic treatment of addiction as well as therapy for other medical problems, as needed. Decisions regarding treatment were based on the individual needs of the patient and on currently accepted medical practice rather than on explicit regulations. We studied the first 43 former heroin addicts who were transferred to this program from more conventional methadone clinics. At a follow-up visit at 52 to 55 months, 33 (82.5%) of 40 patients had remained in treatment, five (12.5%) had been discharged because of excessive abuse, and two (5%) had been voluntarily discharged. Personal benefits of medical maintenance include the dignity of a standard professional atmosphere and a more flexible operating schedule. This program has the potential for improving treatment of selected methadone maintenance patients.

0169-2600/92/0000-0000

The purpose of medical maintenance is to provide pharmacologic treatment of heroin addiction in a medical setting similar to that used for treatment of other chronic diseases. Concomitant medical problems are treated by the same physicians. In this study, decisions regarding treatment were based on the individual needs of the patient and on currently accepted medical practice rather than on explicit regulations. We describe how the medical maintenance program and the first 43 former heroin addicts who received medical maintenance between June 1983 and January 1992.

#### Patients and Methods

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### Medical Maintenance Admission Criteria

- At least 4 years in MMTP
- Negative urines for last 3 years
- Working/School etc.
- Adequate income for fees
- Recommendation from clinic
- Not in military reserves
- Stable and safe storage environment

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### Medical Maintenance Procedures

- Patient given 28 day supply of methadone, by MD, in disket/tablet form, every 4 weeks.
- Medication prepared by hospital pharmacy in usual Rx type bottle and label
- Routine urine toxicology
- Patient returns before "run out" date
- Primary care provided

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### Medical Maintenance



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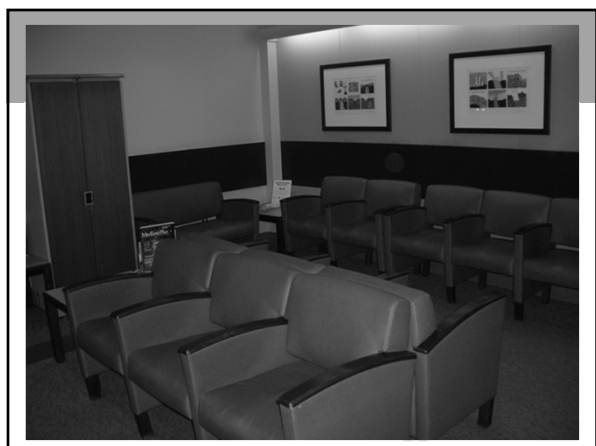
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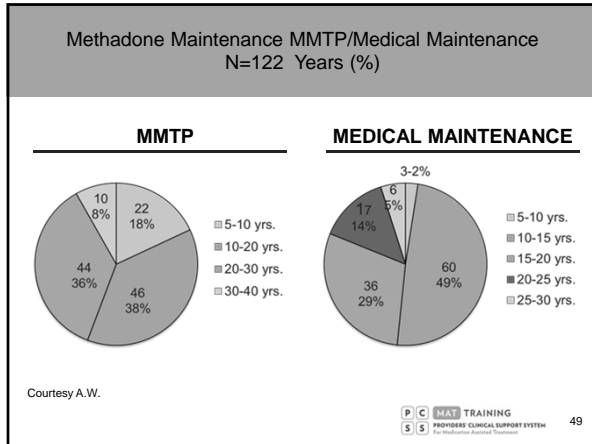
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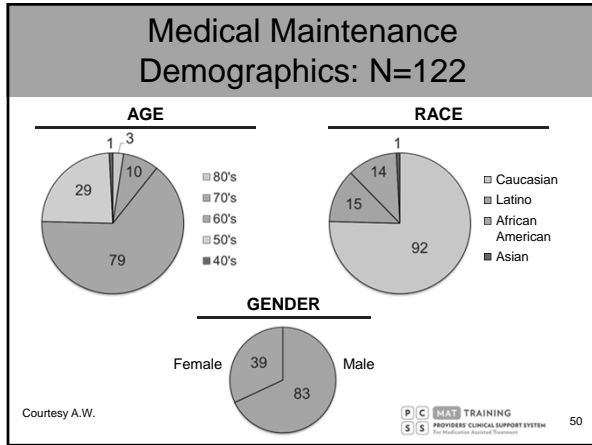
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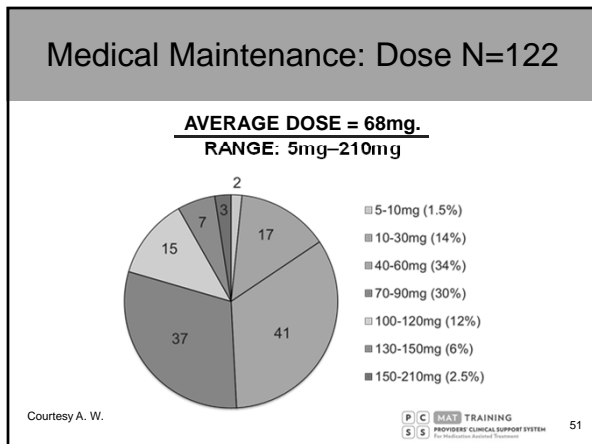
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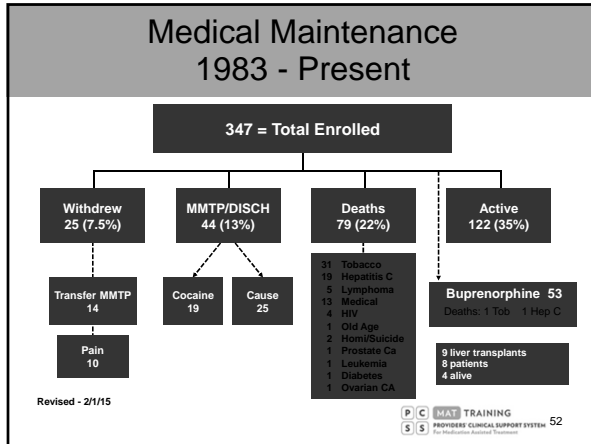
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## Deaths 82 (22%)

# of Patients	Cause
31	Tobacco
19	Hepatitis C
5	Lymphoma
13	Medical
4	HIV
1	Old Age
2	Homicide/Suicide
1	Prostate Cancer
1	Leukemia
1	Diabetes
1	Ovarian Cancer

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## Methadone Medical Maintenance

Arch Intern Med. 1990;120(2):97-99

### Absence of Antibody to Human Immunodeficiency Virus in Long-term, Socially Rehabilitated Methadone Maintenance Patients

David M. Newick, MD; Herman Joseph, T. Scott Crosson, MD; Edwin A. Sahitz, MD; Grace Wang, MD; Beverly L. Richman, MD; Leonid Poretsky, MD; Janet B. Keeffe, MD, PhD; Estelle Whitberg, MD

Arch Intern Med. 1990;120(2):97-99.

**Abstract**

- Human immunodeficiency virus (HIV) infection has become widespread among parenteral drug abusers. We measured antibody to HIV and hepatitis B virus markers in 58 long-term, socially rehabilitated methadone-maintained former heroin addicts. None of the 58 had antibody to HIV, but one or more markers of hepatitis B virus infection were seen in 53 (91%). The duration of methadone maintenance was 16.9±5 years, and the median dose of methadone was 60 mg (range, 5 to 150 mg). Before methadone treatment, the patients had abused heroin parenterally for 10.3±7 years, and they had engaged in additional high-risk practices for HIV infection. We conclude that successful outcomes during methadone maintenance treatment are associated with sparing of parenteral drug abusers from HIV infection.

“Methadone Saved My Life”  
“I Never Thought I’d Get To Be \_\_\_ Yrs Old”

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## Occupations of OBOT OAT Patients

- Teacher
- Electrician
- Plumber
- Social Worker
- Psychologist
- Chauffer
- Computer/IT
- Drug Counselor
- Accountant
- Retail Manager
- Home Security Systems
- Restaurateur
- Fish Dept. Manager
- Movie Editing
- Student (Ph.D)
- HVAC Tech.
- Stamps
- School Principal
- Artist
- Advertising VP
- Bus Driver—MTA\*
- Sanitation Driver\*
- Con Ed Utility\*
- Subway Signal—MTA\*
- Sales
- Secretarial
- Administrator
- Piano Teacher
- Elevator Repair
- Lawyer
- Physician
- Landscaper
- Car Salesman/Repair
- Videographer
- Heavy Equipment
- Contractor
- Entrepreneur
- Musician
- Nurse

\* Safety Sensitive—Employer's OK

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## Methadone → Buprenorphine

ORIGINAL ARTICLE

### Transitioning Stable Methadone Maintenance Patients to Buprenorphine Maintenance

*Edwin A. Sobitz, MD, Christopher C. Holden, MD, Susan Truss, PhD, and Ann Nugent, BA*

Association between methadone and buprenorphine dose (N = 25).

JAM, 2010 (4) 88-92

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## OAT: Stigma

### One of Medicine's Best-Kept Secrets: Methadone Works

Greatest success stories go unsold because of stigma.

BY CHRISTOPHER L. BRYAN

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## STIGMA--METHADONE

- "My Wife's Opinion Is that Methadone Maintenance Treatment Is As Close To **Evil** As You Can Get, Without Killing Someone."

A "successful" methadone patient quoting his wife's attitude toward methadone maintenance treatment.

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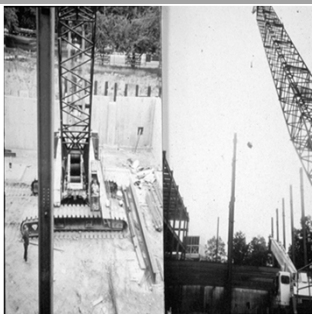
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## OAT: Stigma



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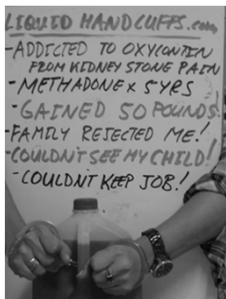
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## OAT: Stigma



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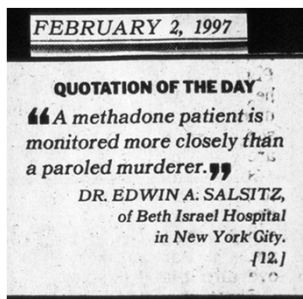
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## OAT: Stigma



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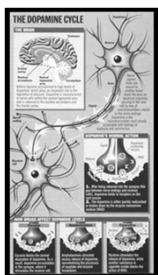
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## OAT Barriers: Terminology



05/1997

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## OAT Barriers: Terminology



1998

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### Duration Barriers: Terminology

- “Substitution Treatment” “OST”
- Standard terminology in Europe and Australia
- ?? Accurate ?? Helpful ?? Harmful
- “Aren’t you just substituting one drug or addiction for another??”
- Why not just call it “Treatment for Opioid Use Disorder?”

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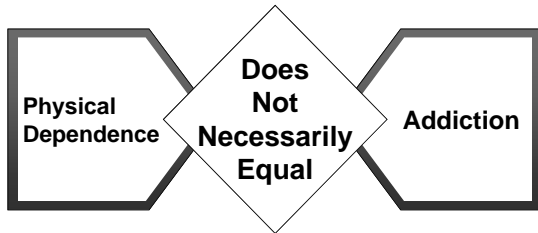
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### OAT: Terminology



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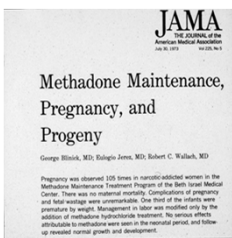
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### Duration Barriers: Pregnancy



#### Neonatal Abstinence Syndrome after Methadone or Buprenorphine Exposure

Hendriks E, Jones, Ph.D., Kanel Kaltenbach, Ph.D., Sarah H. Heil, Ph.D., Susan M. Stone, M.D., Ph.D., Mara G. Coyle, M.D., Amelia M. Armita, Ph.D., Kevin E. O'Grady, Ph.D., Peter Selby, M.B., B.S., Peter R. Martin, M.D., and Gabriele Fischer, M.D.

MOTHER Study, NEJM, 2010

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## Duration Barriers: Policy

Jan, 2015, *Alcoholism Drug Abuse Weekly*

### Mayor Steps Up His Criticism Of Methadone

By RACHEL L. STARBUCK  
Published: August 19, 2015

One day after detailing his plan to wean 2,000 heroin addicts off methadone at city hospitals, Mayor Rudolph W. Giuliani stepped up his attack on methadone treatment providers yesterday, accusing them of enslaving former drug users instead of pushing them toward abstinence.


**TURNAROUND RUDY PUTS \$5M IN METHADONE CLINICS**

By Susan Edlinovitz October 6, 1999 4:05pm

Mayor Giuliani has backed off further from his view to end methadone treatment for heroin addicts — funding a \$5 million expansion of the city's clinics.

The money is going to methadone centers at all 11 public hospitals to extend clinic hours and add job training and psychological evaluations, said city Health and Hospitals Corporation spokeswoman Jane Zimmerman.

The move comes a year after Giuliani called Clinton administration drug czar Barry McCaffrey "a disaster" for backing methadone treatment over abstinence.



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## CJS Barriers: Good News

### SAMHSA Bans Drug Court Grantees from Ordering Participants off MAT

February 24, 2015 by [ATTCteam](#)

"A grant announcement issued by the Substance Abuse and Mental Health Services Administration (SAMHSA) last month to fund drug courts contains an important new condition: drug courts funded by the grants would no longer be allowed to tell offenders to stop taking medications to treat opioid use disorders. Many drug court judges have opposed methadone or buprenorphine and required participants to stop taking them. Drug courts prefer either abstinence or Vivitrol.




From the SAMHSA Request for Applications (RFA): "Under no circumstances may a drug court judge, other judicial official, correctional supervisor officer, or any other staff connected to the identified drug court deny the use of these medications when made available to the client under the care of a properly authorized physician and pursuant to a valid prescription and under the conditions described above."

The grant language refers to medication-assisted treatment (MAT) and includes methadone, buprenorphine, oral naltrexone, Vivitrol (injectable 30-day naltrexone) and other medications."

Read more at: <http://www.alcoholismdrugabuseweekly.com/Article-Detail/samhsa-bans-drug-court-grantees-from-ordering-participants-off-mat.aspx>

Source: AlcoholismDrugAbuseWeekly.com — February 16, 2015



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THE ROCKEFELLER UNIVERSITY

1901 - 2001


*Science for the Benefit of Humankind*

John D. Rockefeller Sr. created the first biomedical research institution in the United States on June 14, 1901. Since then, countless The Rockefeller University have:

- Discovered that DNA is the basic material of heredity
- Determined that cancer can be caused by a virus
- Learned how to preserve whole blood, making blood banks possible
- Identified the AIDS factor
- Pioneered the modern science of cell biology
- Confirmed the connection between cholesterol and heart disease
- Developed exclusive treatment to manage heroin addiction
- Isolated the dendritic cell, a key immune-system cell that may yield new therapies for viral infections and cancer
- Discovered Rigin's hormone that influences appetite, energy use and body weight
- Developed the AIDS cocktail drug therapy

For 100 years, Rockefeller investigations have earned international recognition, and it has received Nobel Prizes — most recently in 1999 and 2003.

THE NEW YORK TIMES, THURSDAY, JUNE 14, 2001



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SPECIAL COMMUNICATION

Implication for Addiction Pharmacotherapy??

**Drug Dependence, a Chronic Medical Illness**  
Implications for Treatment, Insurance, and Outcomes Evaluation

**Thomas M. Kosten, PhD**  
David C. Lewis, MD  
Charles P. O'Brien, MD, PhD  
Markus D. Schulz, MD

**MAJORITY EXPERTS AND THE** The effects of drug dependence on social systems has helped shape the generally held view that drug dependence is primarily a social problem, not a medical problem. In turn, medical approaches to prevention and treatment of drug dependence have been shaped by this view. We examined evidence that drug (including alcohol) dependence is a chronic medical illness. A chronic illness requires the diagnosis, surveillance, etiology (genetic and environmental factors), pathophysiology, and response to treatment (medication and non-drug) of drug dependence to be defined. Genetic, epigenetic, and adaptive, cause is heritability, patient factors, and environmental factors are complexly intertwined in the etiology and course of all of these disorders. Drug dependence produces significant and lasting changes in brain chemistry and function. Effective interventions are available for treating medical, alcohol, and drug dependence. Both physiologic (RR, T) and psychological s/sx. Approximately 54% follow naturally in chronic, low-level, protracted, fluctuating, and relapsing dependence. Dependence does not remit or resolve. Dependence should be treated as if it were a chronic illness. Further research suggests that long-term maintenance of medication management and continuous treatment produce lasting benefits. Drug dependence should be treated, tracked, and understood like other chronic illnesses.

www.pain.com  
© 2012, Lippincott Williams & Wilkins

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**“Ass Backwards” Paradigm**

- The patients who have responded well to OAT, are the patients who are urged to “get off” their medication. They are often not rewarded with the Federal and State regulations for which they are entitled.
- The patients doing well, feel the most stigmatized.
- Protracted Abstinence Syndrome  
Both Physiologic(RR, T) and Psychological s/sx
- No other chronic medical disease is viewed this way by providers—asthma, hypertension, diabetes, depression
- No acceptance by insurers of long term maintenance, no longer requiring weekly UDTs or documented counseling

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**What If There Were a Methadone or Buprenorphine for:**

- Methamphetamine and Cocaine Addiction?
- Alcohol Addiction?
- Tobacco Addiction?
- Benzodiazepine Addiction?
- Food Addiction?
- Pathological Gambling?

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### Final Comments: OAT Duration

- The scientific evidence base, and 50 years of clinical experience overwhelmingly support maintenance in the OAT treatment paradigm.
- The goal of OAT maintenance is not to see how fast a patient can “get off” medication.
- The goal is normalization and stabilization of the brain, establishing durable and safe hedonic tone, and functioning at maximal potential at home and at work.
- Like most chronic medical therapies, the medication only works, when it is taken.
- “If It Ain’t Broke, Why Fix It?”


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### MEDICATION ASSISTED ADDICTION TREATMENT

“All Treatments Work For **Some** People/Patients”  
 “**No One** Treatment Works for **All** People/Patients”

If your treatment is working, keep doing the treatment  
 If your treatment is not working, change your treatment!!


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### Why Is This So Important?



Actor Philip Seymour Hoffman, who was found dead February 2, 2014 on the bathroom floor of his New York apartment with a syringe in his left arm, died of acute mixed drug intoxication, **including heroin**, cocaine, benzodiazepines and amphetamine, the New York medical examiner's office said Friday


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**Vincent Dole, Albert Lasker Award**  
 JAMA, 1988      \*27 Years Ago

- "It is postulated that the high rate of relapse of addicts after detoxification from heroin use is due to persistent derangement of the endogenous ligand-narcotic receptor system and that methadone in an adequate daily dose compensates for this defect. **Some patients with long histories of heroin use and subsequent rehabilitation on a maintenance program do well when the treatment is terminated. The majority, unfortunately, experience a return of symptoms after maintenance is stopped. The treatment, therefore, is corrective but not curative for severely addicted persons.** A major challenge for future research is to identify the specific defect in receptor function and to repair it. **Meanwhile, methadone maintenance provides a safe and effective way to normalize the function of otherwise intractable narcotic addicted patients."**

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