Saving Lives:
Bringing Buprenorphine to Emergency Care

ED BRIDGE
Emergency Buprenorphine Treatment

HIGHLAND EMERGENCY
DEPARTMENT OF EMERGENCY MEDICINE
ALAMEDA HEALTH SYSTEM - HIGHLAND HOSPITAL

Andrew A Herring, MD

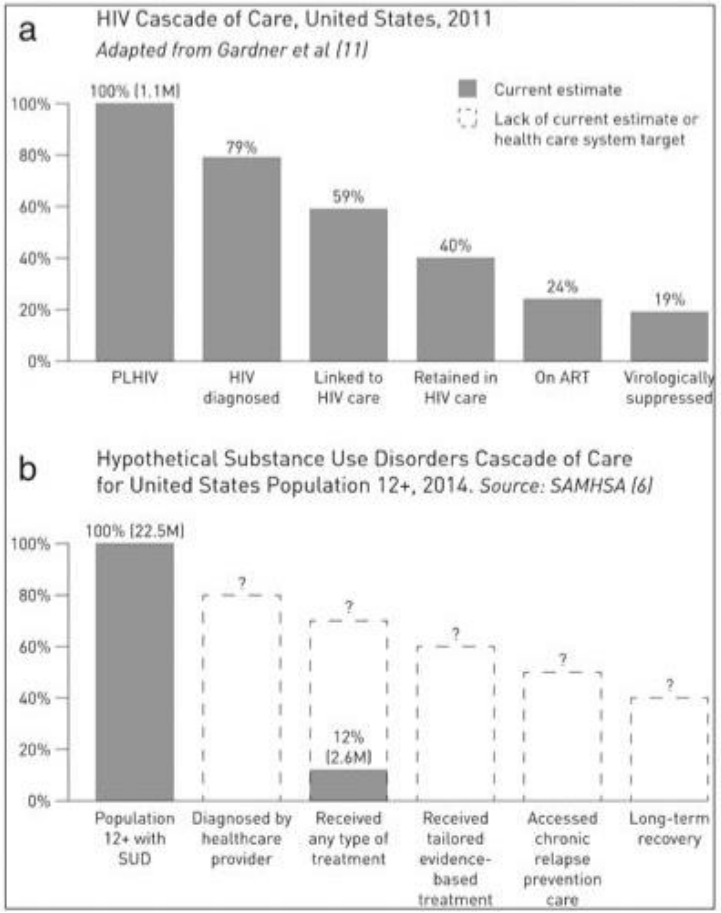
Associate Research Director, Department of Emergency Medicine
Medical Director Substance Use Disorder Program
Attending Interdisciplinary Pain Program
Highland Hospital—Alameda Health System
Assistant Clinical Professor of Emergency Medicine, UCSF

Off Label-use Disclosure

I will be discussing off-label uses of buprenorphine

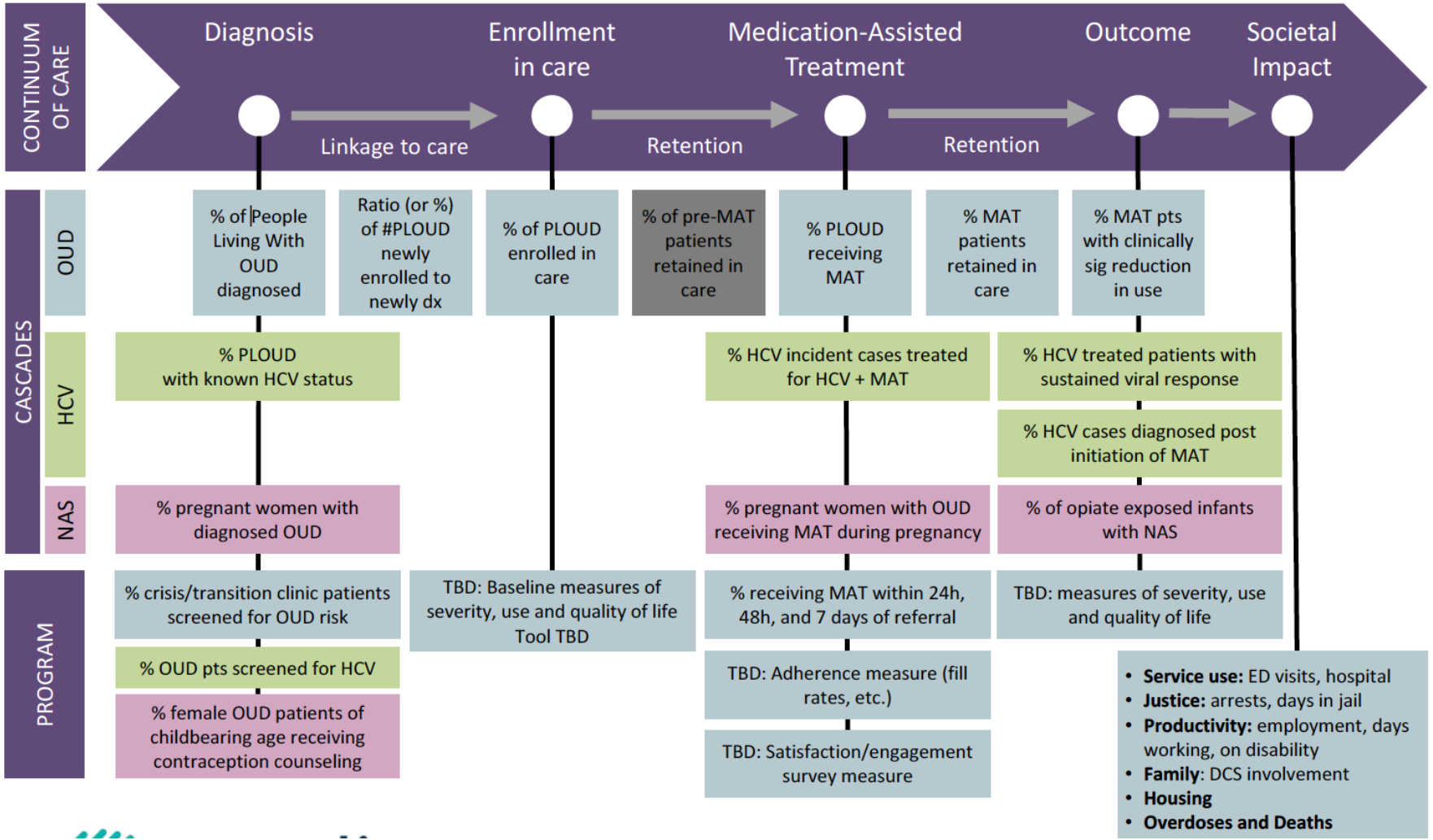
1. **Address diversion aggressively. Increase enforcement for private MDs practicing out-of-pocket opioid practices (including) buprenorphine (BUP) suspicious for diversion. Investigate and prosecute.**
2. **Incentivize low-threshold BUP providers at FQHCs. Implement 5-day grace period for Prior Authorization.**
3. **Include methadone (OTP) in Medicaid coverage**
4. **Cap funding for any opioid treatment program that does not include treatment with buprenorphine or methadone. Funding should be 70% / 30%**
5. **Remove restriction on buprenorphine for treatment of pain. 40% of Medicaid patients currently on 50MME / day should be on buprenorphine by 2023**

6. **Encourage the development of community-based Harm Reduction coalitions.**
   Fund needle exchange, HIV/HEPC, and Nalxone programs
7. **Include Harm Reduction and BUP in state training for medical, nursing, pharmacy, paramedic, and law enforcement.**
8. **Independently fund Pre-treatment engagement – peers/navigators/coaches to bring patients into care.**
9. **Don't let hospitals off the hook.**
   Require hospital's to prove engagement and initiation of MAT
10. **Treat withdrawal as a medical emergency.**



Cascade of Care

Socías ME, Volkow N, Wood E; Adopting the 'cascade of care' framework: an opportunity to close the implementation gap in addiction care? Addiction; 2016 Dec;111(12):2079- 2081.


CONTINUUM OF CARE
Diagnosis
Enrollment in care
Medication-Assisted Treatment
Outcome
Societal Impact
Linkage to care
Retention
Retention
CASCADES
OUD
HCV
NAS
PROGRAM
% of People Living With OUD diagnosed
Ratio (or %) of #PLOUD newly enrolled to newly dx
% of PLOUD enrolled in care
% of pre-MAT patients retained in care
% PLOUD receiving MAT
% MAT patients retained in care
% MAT pts with clinically sig reduction in use
% PLOUD with known HCV status
% HCV incident cases treated for HCV + MAT
% HCV treated patients with sustained viral response
% HCV cases diagnosed post initiation of MAT
% pregnant women with diagnosed OUD
% pregnant women with OUD receiving MAT during pregnancy
% of opiate exposed infants with NAS
% crisis/transition clinic patients screened for OUD risk
TBD: Baseline measures of severity, use and quality of life Tool TBD
% receiving MAT within 24h, 48h, and 7 days of referral
TBD: measures of severity, use and quality of life
% OUD pts screened for HCV
TBD: Adherence measure (fill rates, etc.)
% female OUD patients of childbearing age receiving contraception counseling
TBD: Satisfaction/engagement survey measure
Service use: ED visits, hospital
Justice: arrests, days in jail
Productivity: employment, days working, on disability
Family: DCS involvement
Housing
Overdoses and Deaths

JAMA The Journal of the American Medical Association

Search JAMA | Advanced Search

Home | Current Issue | All Issues | Online First | Collections | CME | Multimedia | Quizzes | For Authors | Subscribe

Multimedia > Video

April 28, 2015

Email | Share

Emergency Department–Initiated Buprenorphine/Naloxone Treatment for Opioid Dependence: A Randomized Clinical Trial

Running Time: **(4:49)**

Game changing, landmark trial by Gail D'Onofrio

Outcome:
30 day retention in treatment

Table 1 Buprenorphine practice guidelines and low threshold office-based protocols

Source	Induction	Follow-up	Counseling
Low Threshold Primary Care Office-based Buprenorphine Treatment	Unobserved induction only; no in-person or in-clinic induction. Patient handout written and text-message or phone support as needed.	Weekly to monthly or less than monthly, varies per patient. Typically, a new induction patient is seen one-week following induction, then less frequently. Refills and less than monthly follow-up are allowed for stable patients.	Generally endorsed by providers for all patients; 12-step and other counseling involvement assessed at follow-up; no requirement or mandate for any additional counseling; no additional counseling available in-clinic.

Bhatraju *et al. Addict Sci Clin Pract (2017) 12:7*
DOI 10.1186/s13722-017-0072-2

Addiction Science & Clinical Practice

RESEARCH Open Access

Public sector low threshold office-based buprenorphine treatment: outcomes at year 7

Elenore Patterson Bhatraju[1,2], Ellie Grossman[2], Babak Tofighi[1,2], Jennifer McNeely[1,2], Danae DiRocco[1], Mara Flannery[1], Ann Garment[2], Keith Goldfeld[1], Marc N. Gourevitch[1] and Joshua D. Lee[2,3*]

Bhatraju et al. Addict Sci Clin Pract (2017) 12:7
DOI 10.1186/s13722-017-0072-2

Addiction Science & Clinical Practice

RESEARCH Open Access

Public sector low threshold office-based buprenorphine treatment: outcomes at year 7

Elenore Patterson Bhatraju[1,2], Ellie Grossman[2], Babak Tofighi[1,2], Jennifer McNeely[1,2], Danae DiRocco[1], Mara Flannery[1], Ann Garment[2], Keith Goldfeld[3], Marc N. Gourevitch[1] and Joshua D. Lee[2,3]*

Table 1 Buprenorphine practice guidelines and low threshold office-based protocols

Source	Induction	Follow-up	Counseling
Center for Substance Abuse Treatment, Treatment Improvement Protocol (TIP) 40, Clinical Guidelines for the Use of Buprenorphine in the Treatment of Opioid Addiction [1]	The consensus panel recommends that physicians administer initial induction doses as observed treatment (e.g., in the office); further doses may be provided via prescription thereafter. This ensures that the amount of buprenorphine located in the physician's office is kept to a minimum. Following the initial buprenorphine dose, patients should be observed in the physician's office for up to 2 hours…Before the initial buprenorphine induction dose…the patient should preferably be exhibiting early signs of opioid withdrawal (e.g., sweating, yawning, rhinorrhea, lacrimation). (p.52)	Induction Day 2 and Forward: Patient returns to office on buprenorphine/naloxone (Figure 4-2)…Patients who return on Day 2 experiencing withdrawal symptoms should receive an initial dose of buprenorphine/naloxone equivalent to the total amount of buprenorphine/naloxone…administered on Day 1 plus an additional 4/1 mg (maximum initial dose of 12/3 mg). If withdrawal symptoms are still present 2 hours after the dose, an additional 4/1 mg dose can be administered. (pp.54–56)	Pharmacotherapy alone is rarely sufficient treatment for drug addiction. For most patients, drug abuse counseling—individual or group—and participation in self-help programs are necessary components of comprehensive addiction care. As part of training in the treatment of opioid addiction, physicians should at a minimum obtain some knowledge about the basic principles of brief intervention in case of relapse. Physicians considering providing opioid addiction care should ensure that they are capable of providing psychosocial services, either in their own practices or through referrals to reputable behavioral health practitioners in their communities. (Executive Summary XX)
American Society of Addiction Medicine (ASAM) National Practice Guideline for the Use of Medications in the Treatment of Addiction Involving Opioid Use (2015) [3]	(3) Clinicians should observe patients in their offices during [buprenorphine] induction. Emerging research, however, suggests that many patients need "not" [sic] be observed and that home buprenorphine induction may be considered. Home based induction is recommended only if the patient or prescribing physician is experienced with the use of buprenorphine. This is based on the consensus opinion of the Guideline Committee. *Induction* Induction within the clinician's office is recommended to reduce the risk of precipitated opioid withdrawal. Office-based induction is also recommended if the patient or physician is unfamiliar with buprenorphine. However, buprenorphine induction may be done by patients within their own homes.[84] Home-based induction is recommended only if the patient or prescribing physician is experienced with the use of buprenorphine. The recommendation supporting home induction is based on the consensus opinion of the Guideline Committee. (p. 33)	(8) Patients should be seen frequently at the beginning of their treatment. Weekly visits (at least) are recommended until patients are determined to be stable. There is no recommended time limit for treatment. *Monitoring treatment* Patients should be seen frequently at the beginning of their treatment. Weekly visits (at least) are recommended until patients are determined to be stable. The stability of a patient is determined by an individual clinician based on a number of indicators which may include abstinence from illicit drugs, participation in psychosocial treatment and other recovery based activities, and good occupational and social functioning. Stable patients can be seen less frequently but should be seen at least monthly. (p. 34)	(5) Psychosocial treatment should be implemented in conjunction with the use of buprenorphine in the treatment of opioid use disorder. Psychosocial treatment and treatment with buprenorphine clinicians who are prescribing buprenorphine should consider providing or recommending office-based or community-based psychosocial treatment. There is some research evidence that the addition of psychosocial treatment improves adherence and retention in treatment with buprenorphine63,94,95; however, these findings are mixed.29,96–99 It is recommended that clinicians offer patients psychosocial treatment early in their treatment with buprenorphine. Effective therapies may include the following: (1) cognitive behavioral therapies; (2) contingency management; (3) relapse prevention; and (4) motivational interviewing. (p. 39)
Low Threshold Primary Care Office-based Buprenorphine Treatment	Unobserved induction only; no in-person or in-clinic induction. Patient handout written and text-message or phone support as needed.	Weekly to monthly or less than monthly, varies per patient. Typically, a new induction patient is seen one-week following induction, then less frequently. Refills and less than monthly follow-up are allowed for stable patients.	Generally endorsed by providers for all patients; 12-step and other counseling involvement assessed at follow-up; no requirement or mandate for any additional counseling; no additional counseling available in-clinic.

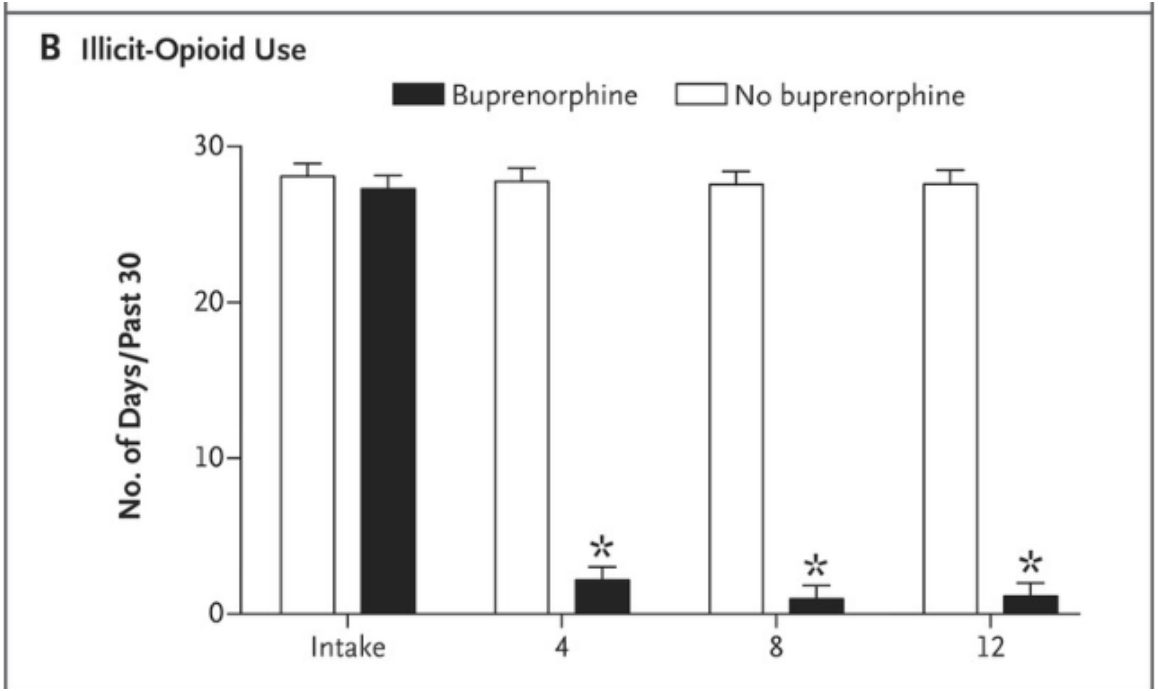
CORRESPONDENCE

Interim Buprenorphine vs. Waiting List for Opioid Dependence

TO THE EDITOR:

December 22, 2016
N Engl J Med 2016; 375:2504-2505
DOI: 10.1056/NEJMc1610047

Stacey C. Sigmon, Ph.D.
Taylor A. Ochalek, B.A.
Andrew C. Meyer, Ph.D.
Bryce Hruska, Ph.D.
Sarah H. Heil, Ph.D.
Gary J. Badger, M.S.
Gail Rose, Ph.D.
John R. Brooklyn, M.D.
University of Vermont, Burlington, VT



ED BRIDGE
Emergency Buprenorphine Treatment

ED-BRIDGE is a partnership with the California Poison Control System and the California Hub and Spoke Expansion Project to provide 24-7 emergency access to buprenorphine treatment for opioid use disorder in all California communities.

California model

Emergency Medical System

ED BRIDGE
Emergency Buprenorphine Treatment

CALIFORNIA POISON CONTROL SYSTEM

CALIFORNIA ACEP
AMERICAN COLLEGE OF EMERGENCY PHYSICIANS

Hub and Spoke system

Barriers for Emergency Department Scale up

Waiver
Fear of diversion
No time or support for complex hand-offs

Goals

Every ED treats opioid withdrawal as an emergency & treats aggressively with **buprenorphine**

Every community has a treatment access hub to accept patients in 72 hours

ED BRIDGE
Emergency Buprenorphine Treatment

Patient with OUD

(-) No withdrawal.
Motivational interviewing and referral to MAT access point

(+) withdrawal
This is a medical emergency and requires treatment with buprenorphine

Emergency Department Provides 24-7 access to administered buprenorphine.

Continues treatment for 72 hours.

Critical action
Obtain consent
Fax name and contact number to MAT access point

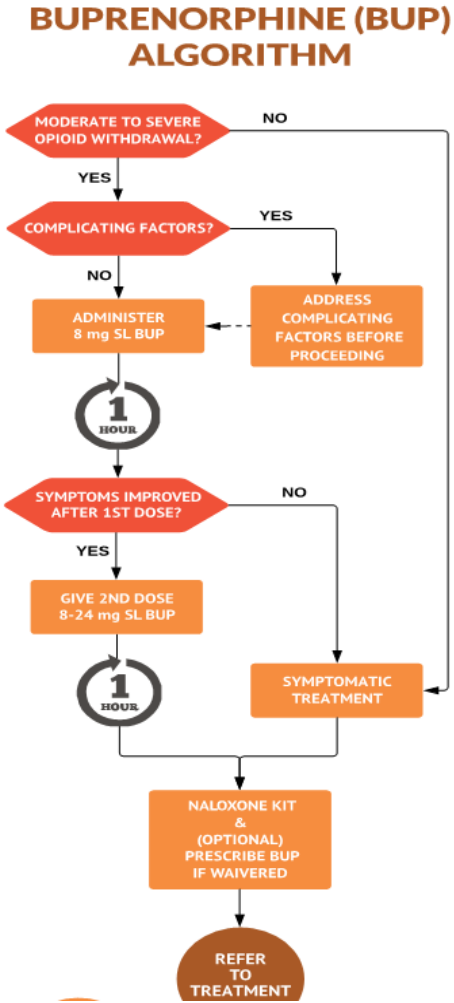
72

cell phone

Critical action
MAT team calls patient to assist with navigation within 24 hours

MAT Access point

1. **Provides buprenorphine within 72 hours**
2. **Provides navigation assistance within 24 hours**



No screening for OUD

No labs

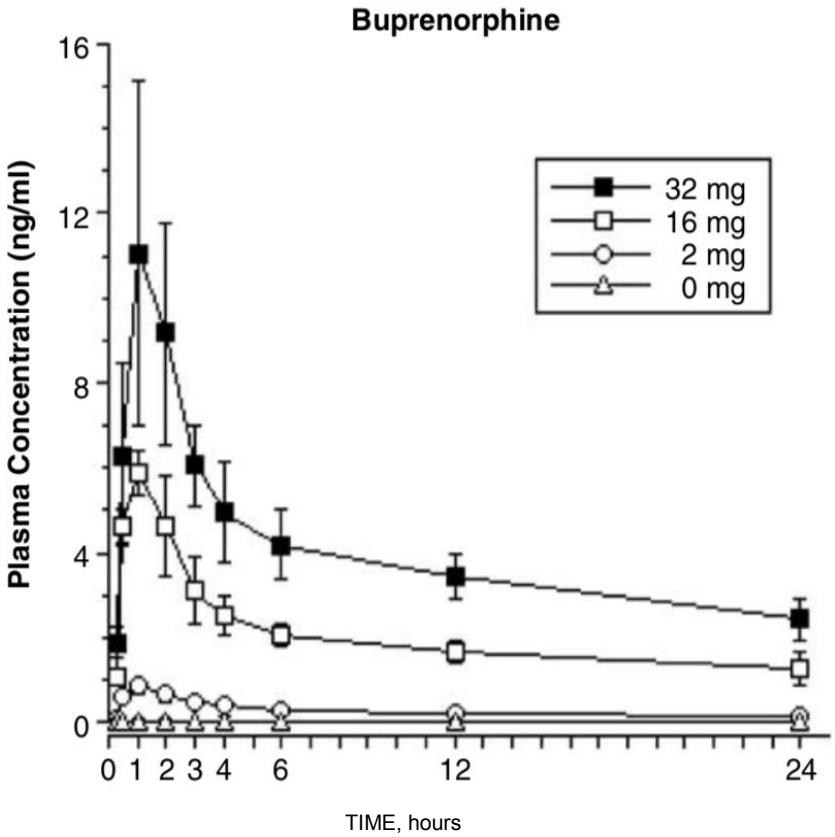
Start Buprenorphine 8mg SL

OBSERVE: 1 hour

If NOT improved, stop and return later

If improved, give 8-16 mg buprenorphine SL

1 Hour Peak Plasma



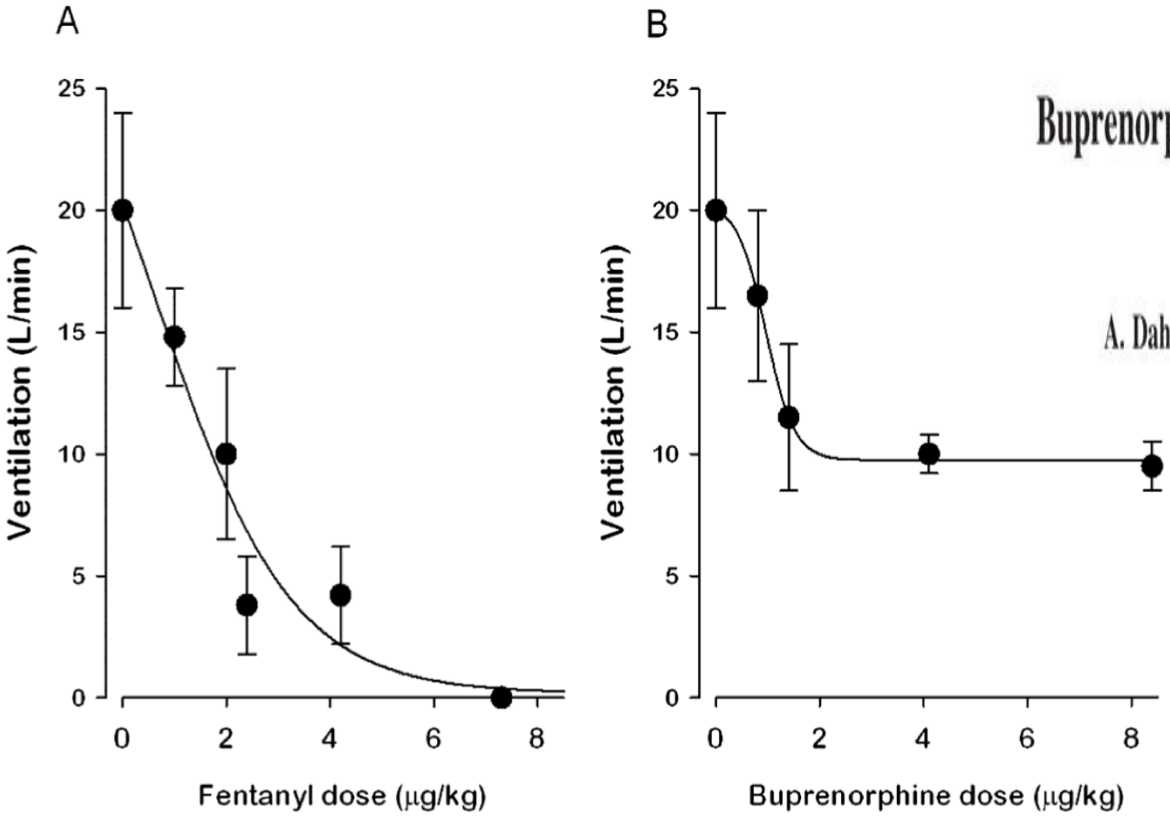
Effects of Buprenorphine Maintenance Dose on μ-Opioid Receptor Availability, Plasma Concentrations, and Antagonist Blockade in Heroin-Dependent Volunteers

Mark K Greenwald[*,1], Chris-Ellyn Johanson[1], David E Moody[2], James H Woods[3], Michael R Kilbourn[4], Robert A Koeppe[4], Charles R Schuster[1] and Jon-Kar Zubieta[5]

Neuropsychopharmacology (2003) 28, 2000–2009

Adverse events should occur within 1 hour of any buprenorphine SL dose

Ceiling on Respiratory Depression

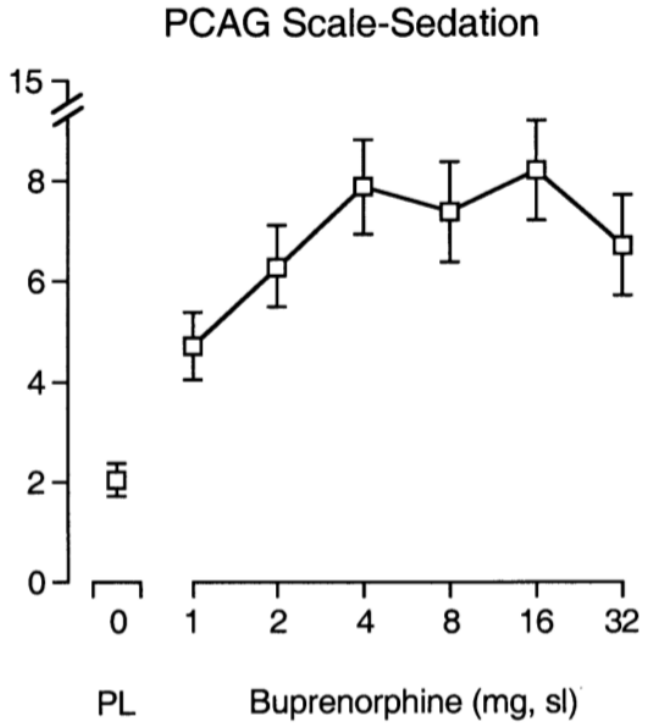


Buprenorphine induces ceiling in respiratory depression but not in analgesia

A. Dahan[1]*, A. Yassen[2], R. Romberg[1], E. Sarton[1], L. Teppema[1], E. Olofsen[1] and M. Danhof[2]

British Journal of Anaesthesia **96** (5): 627–32 (2006)
doi:10.1093/bja/ael051 Advance Access publication March 17, 2006

Ceiling on Sedation



ELSEVIER

Drug and Alcohol Dependence 70 (2003) S13–S27

DRUG and ALCOHOL DEPENDENCE

www.elsevier.com/locate/drugalcdep

Review

The clinical pharmacology of buprenorphine: extrapolating from the laboratory to the clinic

Sharon L. Walsh [a,*], Thomas Eissenberg [b]

[a] *Behavioral Pharmacology Research Unit, Department of Psychiatry and Behavioral Sciences, John Hopkins University, 5510 Nathan Shock Drive, Baltimore, MD 21224, USA*

[b] *Department of Psychology and Institute for Drug and Alcohol Studies, Virginia Commonwealth University, Richmond, VA 23298, USA*

Received 19 December 2002; accepted 4 February 2003

VAS score of Withdrawal Intensity

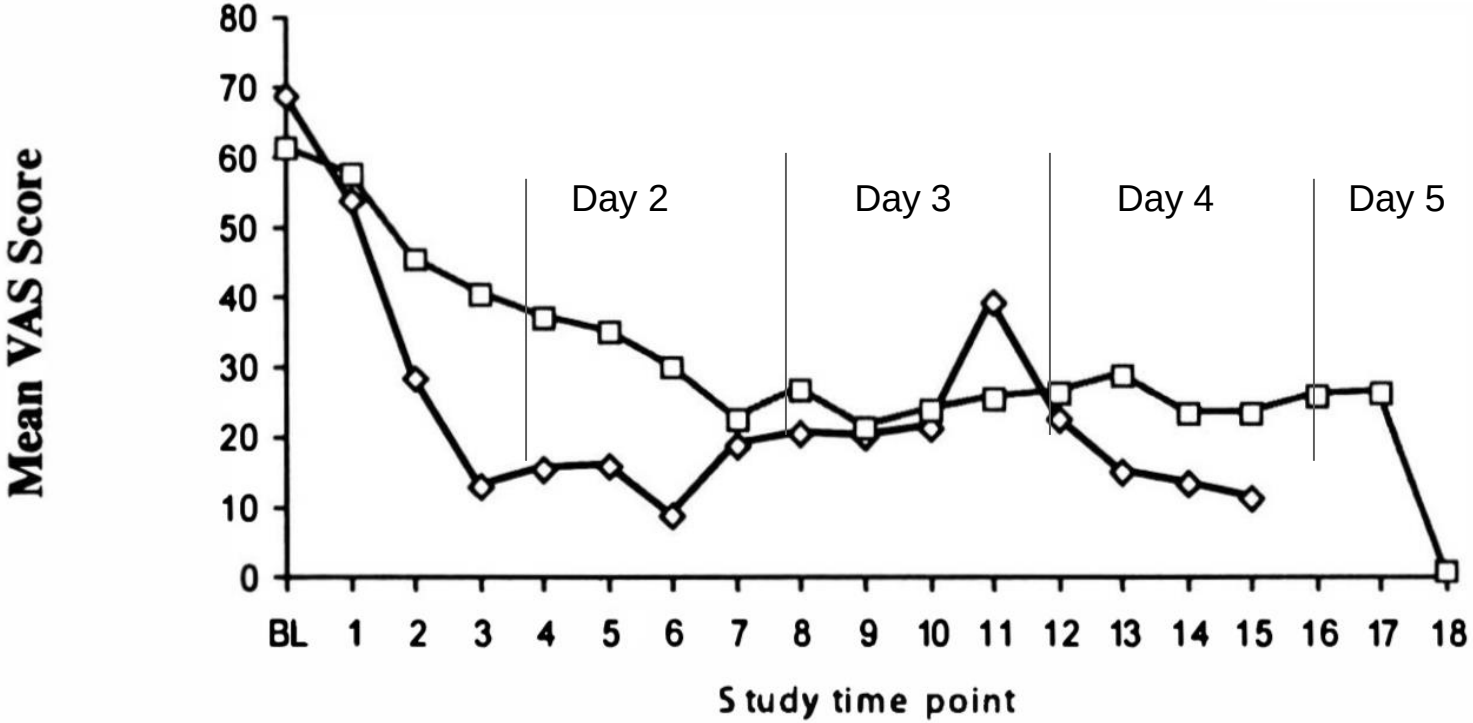
ED BRIDGE
Emergency Buprenorphine Treatment

SL BUP DOSE: 24mg x 1 day vs 8mg daily x 3 days

Single Dose of 24 Milligrams of Buprenorphine for Heroin Detoxification: An Open-label Study of Five Inpatients

Kathleen Ang-Lee , Michael R. Oreskovich , Andrew J. Saxon , Craig Jaffe , Charles Meredith , Mei Ling K. Ellis , Carol A. Malte & Patricia C. Knox

Journal of Psychoactive Drugs



Highland Hospital ED SUMMARY

ED BRIDGE
Emergency Buprenorphine Treatment

Chart review 2017-2018

- 86 patients administered 24-32mg SL
- 144 patients administered at least 16mg SL
- Several cases of mild nausea
- 1 migraine
- No sedation
- No cases of worsening withdrawal

Key steps in starting a buprenorphine program in an ED

1. **Talk with your pharmacy director to be sure that buprenorphine is on the hospital formulary.**
2. **Develop a connection and with an outpatient facility who can receive patients referred from the ED.**
3. **Train nurses and doctors how to assess opioid withdrawal severity and how to dose buprenorphine.**
4. **Create or adapt a simple guide for providers for use in the clinical areas for real-time consultation.**
5. **If possible, bring in a patient care navigator to help patients transition to outpatient care.**
6. **Obtain patient education materials from outpatient partners that describe how to access their buprenorphine treatment services.**

OTHER RESOURCES

EXAMPLE P&T MONOGRAPH

PROJECT SHOUT WEBINAR SERIES FOR PROVIDER EDUCATION

UNIVERSAL BUPRENORPHINE ALGORITHM POSTER

1. **Address diversion aggressively. Increase enforcement for private MDs practicing out-of-pocket opioid practices (including) buprenorphine (BUP) suspicious for diversion. Investigate and prosecute.**
2. **Incentivize low-threshold BUP providers at FQHCs. Implement 5-day grace period for Prior Authorization.**
3. **Include methadone (OTP) in Medicaid coverage**
4. **Cap funding for any opioid treatment program that does not include treatment with buprenorphine or methadone. Funding should be 70% / 30%**
5. **Remove restriction on buprenorphine for treatment of pain. 40% of Medicaid patients currently on 50MME / day should be on buprenorphine by 2023**

6. **Encourage the development of community-based Harm Reduction coalitions.**
   Fund needle exchange, HIV/HEPC, and Nalxone programs
7. **Include Harm Reduction and BUP in state training for medical, nursing, pharmacy, paramedic, and law enforcement.**
8. **Independently fund Pre-treatment engagement – peers/navigators/coaches to bring patients into care.**
9. **Don't let hospitals off the hook.**
   Require hospital's to prove engagement and initiation of MAT
10. **Treat withdrawal as a medical emergency.**

Andrew.a.herring@gmail.com

Hannah.Snyder@ucsf.edu

Kathy.vo@ucsf.edu