

**In Response to Comment that the results of Baltimore Study we provided deal with violent crime but not theft and vandalism and that it's flawed by inclusion of hospitals and other facilities.**

This is not quite accurate on both accounts.

Citizens' concerns that **methadone treatment centers (MTCs)** might be focal points for serious crime are unwarranted, a NIDA-supported study suggested. Dr. Susan Boyd and colleagues at the University of Maryland School of Medicine in Baltimore found that crime rates in the immediate vicinities of that city's MTCs were level with the rates in the surrounding neighborhoods.

The researchers used Baltimore City Police Department records from 1999–2001 and global positioning data to plot the distribution of **FBI Part I crimes (homicide, forcible rape, robbery, aggravated assault, burglary, larceny theft, motor vehicle theft, and arson)** within a 100-meter (328-foot) radius of 15 MTCs. A statistical analysis of the plots showed that the crimes were no more frequent within 25 meters of the MTCs than they were 75 to 100 meters away.

In contrast to the case with MTCs, the likelihood of Part I crimes rose with closer proximity to convenience stores. The researchers suggest that the high volume of foot traffic around these stores provides opportunities for criminals to find victims. Consistent with this surmise, the frequency of crime declined near mid-block residences, where foot traffic is relatively sparse.

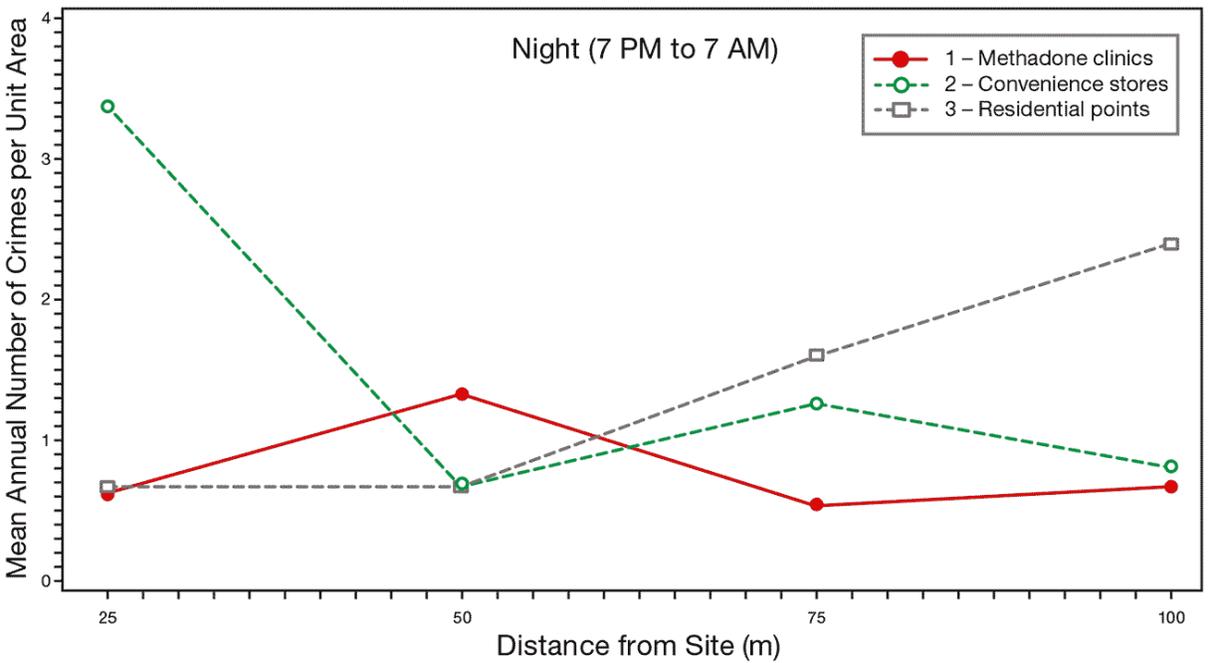
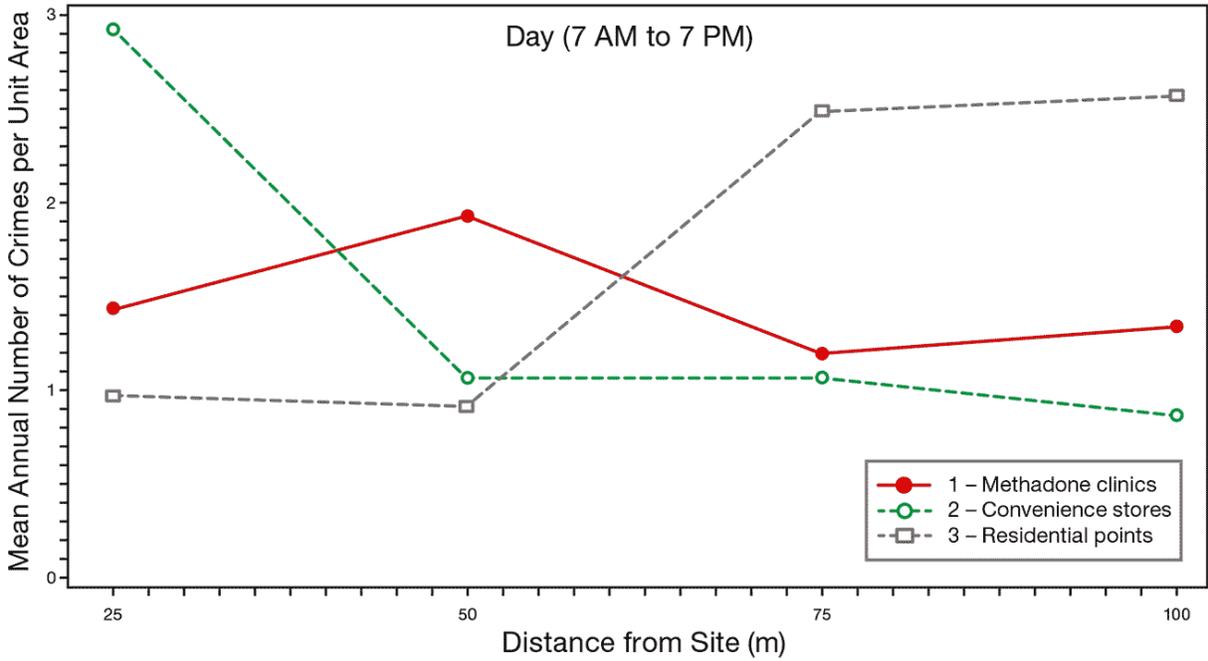
The study MTCs included all but one of the 16 centers located in Baltimore. **They were situated in diverse communities, including inner-city, working-class, and middle-class neighborhoods, according to Dr. Boyd. The convenience stores and residences were located in neighborhoods that closely resembled those of the MTCs in demographic and social features that influence crime rates.**

**The Hospitals were included in study to provide comparison rates but were not included in analysis due to lack of sufficient number of hospitals to provide meaningful comparison.**

**"There's no evidence from our study of increased reports of crime around the methadone clinics,"** says Dr. Boyd. She and colleagues are now analyzing data on actual arrests around the study sites to see whether drug sales and possession increase with proximity to methadone treatment centers. The researchers hope that demonstrating that MTCs are not hot spots for crime will reduce public resistance to the building of new centers, and thus remove an impediment to making methadone treatment more widely available.

**Crime Rates Around 15 Methadone Treatment Facilities, and Matched Convenience Stores and Residential Neighborhoods in Baltimore, 1999–2001** The annual rate of FBI Part I crimes\* per unit area (1692 m<sup>2</sup>) was not significantly associated with proximity to methadone clinics. In contrast, crime increased with proximity to convenience stores and decreased with proximity to points within residential neighborhoods.

**Crimes measured for this study were all FBI Part I crimes, including homicide, forcible rape, robbery, aggravated assault, burglary, larceny theft, motor vehicle theft, and arson.**



The figure shows that during both day (7 am to 7 pm) and night (7 pm to 7 am), the rate of crime at distances of 25, 50, 75 and 100 meters from methadone clinics is similar at each of the distances, generating a roughly horizontal line. The rates range from 1.2 to 1.8 during the day, and from 0.7 to 1.3 at night.

The plot for convenience stores shows the highest crime rates at 25 meters with rates of 2.9 during the day, and 3.4 at night, with declines to a level plateau of 0.7 to 1 at distances of 50, 75 and 100 meters.

Crime rates for hospitals and residential areas linearly increased with distance during the day, from 0.7 to 1.0 at 25 meters up to about twice that rate at 100 meters. At night, rates for residential areas also increased with distance, from 0.7 to 2.0, while at night crime rates were similar at all distances from hospitals, in the range of 0.4 to 1.2.

The abstract of the study along with comment and abstracts of studies looking at crime rate related to methadone Treatment Programs are available here.

## Addiction

. 2012 Sep;107(9):1632-8. doi: 10.1111/j.1360-0443.2012.03872.x. Epub 2012 Apr 30.

### Use of a 'microecological technique' to study crime incidents around methadone maintenance treatment centers

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#### Abstract

**Aims:** Concern about crime is a significant barrier to the establishment of methadone treatment centers (MTCs). Methadone maintenance reduces crime among those treated, but the relationship between MTCs and neighborhood crime is unknown. We evaluated crime around MTCs.

**Setting:** Baltimore City, MD, USA.

**Participants:** We evaluated crime around 13 MTCs and three types of control locations: 13 convenience stores (stores), 13 residential points and 10 general medical hospitals.

**Measures:** We collected reports of Part 1 crimes from 1 January 1999 to 31 December 2001 from the Baltimore City Police Department.

**Design:** Crimes and residential point locations were mapped electronically by street address (geocoded), and MTCs, hospitals and stores were mapped by visiting the sites with a global positioning satellite (GPS) locator. Concentric circular 'buffers' were drawn at 25-m intervals up to 300 m around each site. We used Poisson regression to assess the relationship between crime counts (incidents per unit area) and distance from the site.

**Findings:** There was no significant geographic relationship between crime counts and MTCs or hospitals. A significant negative relationship (parameter estimate -0.3127,  $P < 0.04$ ) existed around stores in the daytime (7 am-7 pm), indicating higher crime counts closer to the stores. We found a significant positive relationship around residential points during daytime (0.5180,  $P < 0.0001$ ) and at night (0.3303,  $P < 0.0001$ ), indicating higher crime counts further away.

**Conclusions:** Methadone treatment centers, in contrast to convenience stores, are not associated geographically with crime.

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**Commentary on Boyd et al. (2012): Free Access**

**Commentary on Boyd et al. (2012): Debunking myths about methadone and crime**

**Amy Nunn Jody Rich**

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Methadone maintenance therapy (MMT) is an opiate replacement therapy (ORT) that has been used in the United States for nearly 50 years to treat chronic opiate addiction 1. Methadone prevents withdrawal symptoms and drug cravings; blocks the euphoric effects of other opiates; and reduces the risk of relapse to illicit use of opiates, infectious disease transmission, crime and overdose death 2-4.

In spite of its demonstrated public and individual health benefits, methadone is associated with tremendous social stigma. Frequently, not-in-my-backyard (NIMBY) campaigns block development of methadone treatment centers (MTCs) in communities most heavily impacted by opiate dependence due to the common misperception that MTCs are associated with increased crime. In this paper, Boyd et al. provide compelling new evidence that debunks myths that geographic areas surrounding methadone treatment centers are associated with crime 5. Instead, they find the inverse is true: MTCs are associated with lower crime rates. In the case of methadone, US federal regulations require that individuals receiving MMT be seen and dosed on a daily basis, at least initially. It follows logically that if MMT reduces crime, having MMT in close proximity might also be associated with reduced crime in areas surrounding methadone clinics. However, this phenomenon has historically been difficult to measure, and the creative, interdisciplinary, geospatial techniques that Boyd et al. utilize provide robust scientific evidence to debunk the popular myth that MTCs are associated with crime.

Although Boyd's analysis was limited to Baltimore, MD, Baltimore has among the highest rates of injecting drug users and opiate dependence of any city in the country. The geospatial coding technique employed by Boyd et al. helps to frame the importance of methadone treatment in a broader social context by focusing less on individuals who struggle with addiction and more on the environments in which they live and are served. This geographic approach will be important for advancing evidence-based interventions in neighborhoods with an unmet need for ORT.

This exemplary analysis that combats stigma about addiction treatment with robust scientific analysis has important public policy implications for Baltimore and elsewhere, and could not be more timely. The United States is currently experiencing an epidemic of opiate addiction, much of which is fueled by increased access to prescription opiates 2. Increased use of prescription opiates has been associated with high rates of overdose, and prescription painkillers are now the second most prevalent type of abused drug after marijuana 4. The new wave of opiate use affects more young people than ever before and has contributed to a dramatic upsurge in overdose deaths; unintentional drug overdoses are now the second leading cause of accidental death in the United States 3.

Prisoners are at particularly high risk for heroin addiction; approximately 24–36% of all heroin addicts, or more than 200 000 individuals, pass through the US criminal justice system each year 6, 7. Other research highlights limited access to ORT in places where individuals addicted to heroin need it most, including in correctional settings across the United States 8. Given the paucity of addiction services

available in many correctional settings, offering methadone in community settings with high rates of opiate dependence is critical for reducing drug-related health harms.

It is unreasonable to expect that a medication alone will be a panacea for opiate dependence without addressing the complex social, behavioral and structural factors that contribute to rising rates of opiate dependence in the United States. However, if the Affordable Care Act is upheld by the Supreme Court of the United States, millions of uninsured people with opiate dependence may have access to health insurance that pays for pharmacological treatment for opiate dependence. That may be a game changer for addiction treatment by allowing for more widespread use of ORT.

Moreover, access to ORT is critically important for reducing morbidity and mortality, particularly for those involved in the criminal justice system. Boyd's study underscores that offering treatment in community settings is not associated with increased crime; rather, MMTs were associated with lower crime rates. In order to combat the new wave of opiate addiction in the United States, we need as many treatment options as possible. It is no longer acceptable to limit the availability of methadone maintenance therapy because of fear of crime. This important finding should contribute to important public policy discussions about how best to expand methadone and other ORT treatments in the communities with greatest unmet need for addiction treatment.

Declarations of interest

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## Health Econ

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### Social costs of robbery and the cost-effectiveness of substance abuse treatment

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Abstract

Reduced crime provides a key benefit associated with substance abuse treatment (SAT). Armed robbery is an especially costly and frequent crime committed by some drug-involved offenders. Many studies employ valuation methods that understate the true costs of robbery, and thus the true social benefits of SAT-related robbery reduction. At the same time, regression to the mean and self-report bias may lead pre-post comparisons to overstate crime reductions associated with SAT. Using 1992-1997 data from the National Treatment Improvement Evaluation Study (NTIES), we examined pre-post differences in self-reported robbery among clients in five residential and outpatient SAT modalities. Fixed-effect

negative binomial regression was used to examine incidence rate reductions (IRR) in armed robbery. Published data on willingness to pay to avoid robbery were used to determine the social valuation of these effects. Differences in IRR across SAT modalities were explored to bound potential biases. All SAT modalities were associated with large and statistically significant reductions in robbery. The average number of self-reported robberies declined from 0.83/client/year pre-entry to 0.12/client/year following SAT ( $p < 0.001$ ). Under worst-case assumptions, monetized valuations of reductions in armed robbery associated with outpatient methadone and residential SAT exceeded economic costs of these interventions. Conventional wisdom posits the economic benefits of SAT. We find that SAT is even more beneficial than is commonly assumed.

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## J Forensic Sci

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### **Criminal behavior in opioid-dependent patients before and during maintenance therapy: 6-year follow-up of a nationally representative cohort sample**

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**PMID: 22845057 DOI: 10.1111/j.1556-4029.2012.02234.x**

#### Abstract

Lifetime prevalence of opioid dependence is about 0.4% in western countries. Opioid-dependent patients have high morbidity and mortality and a high risk of criminal behavior. Few studies have addressed the long-term impact of opioid maintenance therapy on convictions and criminal behavior. The PREMOS study is a prospective, longitudinal, naturalistic clinical study of a nationally representative sample of 2694 opioid-dependent patients to investigate convictions and criminal behavior at baseline and after 6 years of maintenance treatment. At follow-up, 2284 patients still were eligible (84.7%). A comprehensive assessment including a patient and doctor questionnaire, and the EuropASI was completed at baseline and follow-up. Data on criminality at follow-up had been received for 1147 (70.6%) patients. A large number (84.5%) of them had been charged or convicted at any time before baseline assessment, most frequently with drug-related offenses (66.8%), acquisitive crime (49.1%), or acts of violence (22.0%). Reported charges and convictions had declined to 17.9% for the last 12 months before follow-up, which was also reflected by a significant decrease in the EuropASI subscore "legal problems" from 1.52 at baseline to 0.98 after 6 years. **These data indicate a significant and clinically relevant reduction in criminal behavior in opioid-dependent patients in long-term maintenance treatment. Maintenance therapy is effective in the reduction in both narcotics-related and acquisition crime.**

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## Comparative Study Addiction

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### Engagement with opioid maintenance treatment and reductions in crime: a longitudinal national cohort study

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#### Abstract

**Aims:** This study investigates changes in criminal involvement among patients in opioid maintenance treatment (OMT) over a 7-year period prior to, during and after treatment, particularly in relation to differences in treatment engagement.

**Design, setting and participants:** Treatment data on all patients who started OMT in Norway between 1997 and 2003 (n = 3221) were cross-linked with national criminal records. The period of observation was divided into four phases; pre-treatment, in-treatment, between treatments and post-treatment.

**Findings:** During OMT, rates of criminal convictions for the cohort were reduced to fewer than half of waiting-list levels [incidence rate (IR) 0.63 versus 1.57]. Patients in continuous treatment had the fewest convictions (IR 0.47) during treatment. The highest rates were found among patients out of treatment after several treatment episodes (IR 1.52). **All groups had significantly fewer criminal convictions during treatment compared to before treatment.** Staying in OMT for 2 years or more was associated with significantly reduced rates of convictions during treatment. Younger age and pre-treatment criminal convictions were associated with significantly (P < 0.001) more convictions during treatment. Those who left treatment, permanently or temporarily, relapsed into high levels of convictions outside treatment.

**Conclusions:** **Criminal activity appears to be reduced in Norway during opiate maintenance treatment.** Younger age and prior history of criminal activity are important risk factors for continued criminal activity during treatment.

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