

Review of Literature Discussing Crime Patterns and Substance Abuse Treatment Programs

Summary

Studies cited show that there is not a correlation between crime and the presence of substance abuse treatment centers. Other types of businesses such as convenience stores, pawnshops and beer establishments¹ tend to have more crime associated with them.

Steps Taken to Research Topic

The following steps were done in the research of this topic:

Contacted:

- American Association for the Treatment of Opioid Dependence (AATOD);
- National Criminal Justice Reference Service (NCJRS);
- National Institutes of Health/National Institute on Drug Abuse (NIH/NIDA);
- UCLA Integrated Substance Abuse Programs;
- Substance Abuse and Mental Health Services Administration (SAMHSA), and
- Other researchers publishing in this field.

Researched publications at:

- National Institutes of Health/National Library of Medicine (NLM), including PubMed and MEDLINE;
- Google, and
- Reviewed bibliographies of published studies to identify additional relevant studies.

Opening Comments

The relationship between crime and substance abuse treatment centers is a hard topic to study since it requires a quantitative methodology and a technology for precisely mapping crime incidents. An example of the difficulty of this work is the RAND retraction of its September 2011 study of crime and medical marijuana dispensaries in the Los Angeles area.² It is also an infrequently studied topic since other drug and crime related topics are more generally studied such as prevalence of specific drug use and before and after crime patterns by persons receiving substance abuse treatment.

¹ "Beer establishments" is the term used in the research literature.

² See RAND retraction of 8-10-2011 retrieved on 1-23-2016 from <http://www.rand.org/news/press/2011/10/24.html>

The authors of the articles mentioned below tend to have both a publication history of studying crime locations in general and a developed expertise in the mathematics and technology of geo-spatial mapping. The result is that while there are infrequent studies of the topic, the studies that are done are authoritative and reliable. The most frequently studied programs are methadone treatment centers which are ambulatory outpatient programs.³

The research results do not support the belief that substance abuse treatment centers are associated with higher crime rates or neighborhood risk. The major factor affecting crime rates is general socio-economic conditions.⁴ There are higher crime rates around some specific locations. These include pawnshops and convenience stores where money is obtainable, bars where alcohol and persons meet, preferred crime locations like areas around bus stops and subway stations and sexually oriented businesses. Because methadone treatment centers have been located in lower socio-economic locations, the centers have become publically associated with the higher crime rates in such areas even though the centers are not a source of the crime.

Moreover, these studies usually use methadone treatment programs. Residential behavioral health programs and substance abuse detoxification programs are substantively different from a methadone program. For example, detoxification treatment programs are not associated with money or alcohol, have staff and security cameras that monitor local surroundings, have clients whose criminal behavior, if they had any, has declined because they are in treatment, and typically provide medications that impact the addiction so that persons attending the treatment center have lower motivation to undertake illegal activities while receiving treatment there.

In general there is a substantial body of literature that shows that persons attending treatment programs commit fewer crimes. These persons may have previously committed crimes, however, while attending treatment they are not found to be a crime-prone population.^{5,6}

Despite the data showing a lack of relationship, there is widespread perception that “drug treatment” programs are accompanied by higher crime rates.⁷ The following material briefly

³ One reason there is more information about methadone clinics is because there are many methadone clinics. According to data from the Substance Abuse and Mental Health Services Administration (SAMHSA) there were 1,282 opioid treatment programs on March 31, 2013. See retrieved on 1-23-2016 from http://www.dasis.samhsa.gov/dasis2/nssats/2013_N-SSATS_National_Survey_of_Substance_Abuse_Treatment_Services.pdf

⁴ For example, Andresen concluded that “In particular, high unemployment (social disorganization theory) and the presence of young populations (routine activity theory) are the strongest predictors of criminal activity.” See Andresen, M. A. (2006). *A spatial analysis of crime in Vancouver, British Columbia: A synthesis of social disorganization and routine activity*, *Canadian Geographer*, Vol. 50, Issue 4: pp. 487–502. Retrieved on 1-23-2016 from <http://onlinelibrary.wiley.com/doi/10.1111/j.1541-0064.2006.00159.x/abstract> Can be purchased from journal.

⁵ Justice Policy Institute (2008 January), *Substance Abuse Treatment and Public Safety* Washington, D.C. Retrieved on 1-23-2016 from <http://www.justicepolicy.org/research/1949>

⁶ See also, retrieved on 1-23-2016 from <http://blog.mlive.com/chronicle/2007/12/MethadoneResearchWebGuide.pdf>

comments on the articles in the bibliography. For readers that wish more information, the bibliography is annotated containing abstracts and other text from the article. In addition to studies directly containing research on treatment centers, also included are discussions of crime and types of businesses. These studies are confirmatory of the findings in the literature that focuses on treatment centers per se. The conclusions of this report are similar to those made by other reviewers who have examined this body of research.⁸

Comments on Articles Found

July 2012 work on medical marijuana dispensaries by UCLA

Funded by the National Institute on Drug Abuse (NIDA), the 2012 University of California at Los Angeles (UCLA) study of crime around medical marijuana dispensaries found “Consistent with previous work, variables measuring routine activities at the ecological level were related to crime. There were no observed cross-sectional associations between the density of medical marijuana dispensaries and either violent or property crime rates in this study.” In other words, the usual factors causing crime were found and the presence of a medical marijuana dispensing program was unrelated to crime.

2012 analysis by T&M Protection Resources

An unpublished report from the T&M Protection Resources studied crime incidents and the local impact associated with two residential substance abuse detoxification programs, one in Florida and one in New Jersey. No impact on local neighborhoods was found.

2012 article by Boyd et al.

Funded by the Robert Wood Johnson Foundation, the work directly addresses crime and methadone treatment programs. Considered an authoritative study, it was been the subject of newspaper articles website postings.⁹ The study collected data on methadone treatment centers (MTCs) in Baltimore and crime patterns around MTCs were compared with crime patterns around 13 convenience stores, 12 residential points and 10 general medical hospitals. A precise GPS mapping methodology was used and the frequency of crimes within a set of 25 meter circles from these sites was measured.

Boyd simply lays out the possible relationships between crime and treatment centers.

⁷ For example see, the Lee County Florida hearing retrieved on 1-23-2015 from <http://www.free2recover.org/wp-content/uploads/2015/06/HEX-Approval.pdf> Another example from Colorado is, retrieved on 1-23-2016 <http://nomethadoneinmonumentdnc.org/wp-content/uploads/2015/12/Plaintiffs-Opening-Brief.pdf>

⁸ See Beck, E. (June 14, 2015), *Research suggests crime won't increase with West Side treatment*, *Charleston Gazette Mail* Retrieved on 1-23-2016 from <http://www.wvgazettemail.com/article/20150614/GZ01/150619707>

⁹ For example, see *Baltimore Sun* story of May 4, 2012. Retrieved on 1-23-2016 from http://articles.baltimoresun.com/2012-05-04/news/bs-ed-methadone-20120504_1_methadone-clinics-fewer-crimes-fbi-uniform-crime-reports

“Three possible relationships could exist, and plausible theories support each relationship. MTCs could decrease neighborhood crime by treating opiate users who live nearby, thereby decreasing their risk of criminal behavior. MTCs could increase crime if they attract untreated or partially treated users into the neighborhood, thereby increasing the local density of people likely to commit crimes. Finally, MTCs could have no crime impact if neighborhood crime relates largely to other factors.”

After analyzing the Baltimore data, Boyd reported “There was no significant change in crime counts with increasing distance from MTCs or hospitals as indicated by non-significant values for parameter estimates of crime slopes. In contrast, there was a significant decrease in crime counts with increasing distance from convenience stores during both daytime and night-time.” In other words, crime decreased the farther the distance from the convenience store indicating that crime originated around convenience stores. In contrast, crime did not decrease around methadone treatment clinics, residential areas, or hospitals as distance from them increased, indicating they were not centers of crime. Boyd and her colleagues concluded that “Overall, our data show that MTCs are not a geographic focus of crime, thus providing both strong evidence to alleviate neighborhood concerns about the establishment and operation of MTCs and quantitative information to combat the stigma of methadone substitution treatment.”

2011 Taniguchi and Salvatore

This 2011 work in Philadelphia also directly studied the relationship between crime and treatment centers and found no connection between treatment programs and crime. They found that controlling for the socio-economic status (SES) of the area removed much of the assumed correlation of treatment centers and crime. Their residual statistical effects were hard to interpret since after the effect of SES was controlled for there was still a positive residual association between crime and treatment centers in high SES areas but a negative residual association in lower SES areas.

The opening of their conclusion states, “Drug and alcohol treatment facilities are widely thought to have negative impacts on the community in which they are located. That is, it is assumed that these facilities bring crime to the areas surrounding their location. The empirical basis for this assertion is tenuous at best. This analysis has not found a definitive relationship between treatment centers and crime.”

2011 study of Montreal and Vancouver

This 2011 Canadian study is reported on in separate articles by Ally and Lasnier. It found that there were no negative impacts on local neighborhoods.

2011 Salem Patch

This is a newspaper story about a zoning board hearing in Peabody, Massachusetts. Comments by police officers and the facts cited about calls for police services are similar to those made in the T&M Protection Resources study. The lead paragraph in the article states: "In the wake of a decision to appeal the methadone clinic decision, Salem Police Chief Paul Tucker and Peabody Police Chief Robert Champagne said methadone clinics don't risk public safety."

It is probably the case that a review of newspaper accounts of zoning board hearings about substance abuse treatment centers would yield additional comments from local law enforcement officers.¹⁰

2007 Philadelphia work of McCord and Lassiter

McCord and Lassiter concluded that crime incidence was a two-factor process. First, the large background variable with a pervasive impact was the amount of "social disorganization" in an area and then, second, there were opportunity points such as bars, pawnshops and subway stations where more drug-related arrests took place. In McCord and Lassiter's perspective, the general characteristics of the local region have a dominant effect on the incidence of crime in the region.

McCord and Lassiter studied ten specific places where crime occurred. The results in the following table show that crimes around inpatient residential substance abuse treatment centers were the lowest of the ten types of places studied.

¹⁰ While not as extensive as the comments by Massachusetts police, a similar comment that "Calgary police say that methadone clinics within the city do not influence crime rates either up or down" can be found at, retrieved on 1-23-2012 from http://www.crchealth.com/addiction/heroin-addiction-treatment/heroin-detox/calgary_methadone/

Table 1: Places in Philadelphia where Crime Occurred and how Frequently Crimes Occurred in Relation to Distance from the Location, 2007.

Facility	Number of Crimes	0-400 ft	400-800 ft	800-1200 ft	1200-1600 ft
Pawnshop	30	7.19	4.71	3.32	2.26
Beer establishment	146	6.77	3.36	2.35	1.67
Halfway house	41	5.22	6.09	4.08	4.10
Cheque-cashing store	96	4.92	3.67	2.79	2.17
Subway station	49	4.58	2.47	1.86	1.48
Drug-treatment centres (outpatient)	20	3.61	4.72	4.93	3.21
Drug-treatment centres (combined)	34	2.77	3.59	4.13	3.15
Homeless shelter	39	2.51	2.83	2.92	2.31
State liquor store	53	2.50	1.89	1.82	1.88
Drug-treatment centres (residential)	14	1.32	1.74	2.63	2.26

Source: Table 2 McCord et al. (2007), Microspatial Analysis of Drug Markets...

Note: For each facility, the table shows the number of that facility in Philadelphia, as well as the location quotient values for four concentric buffers expanding from the facility at 400 ft intervals. Values greater than 1 indicate a greater density of drug arrests than would be expected from a uniform distribution across the city. Values of 2, for example, indicate that the density of drug arrests is twice the uniform city rate. Drug treatment centres, both residential and outpatient, were combined in the ZIP model analysis. All three location quotient values (residential, outpatient, and combined) are shown here.

Crime around outpatient substance abuse centers was lower than crimes at five other sites: pawnshops, beer establishments, halfway houses, cheque-cashing stores, and subway stations.

The logic used by McCord and Lassiter is similar to the logic used in the 2012 Boyd et al. study. This logic is at the heart of the conclusion that treatment centers are not a source of crime. The general problem is how to study crime at a particular location within a high crime area. The methodology to solve this question relies on precise measurements of the location of each crime occurring near the particular location. For example, 25 meters away, 25 to 50 meters away, 75 to 100 meters away etc.

The theoretical reasoning is that if crime rates are high next to the location and drop off as distance from the location increases, then the location is a crime center. If crime rates remain constant or increase as distance from the location increases, then location is not a crime center. The precise measurement of crime around a location is way of controlling for the fact that all locations may be in or near areas with high crime rates.

The necessity for this measurement also indicates why such studies are infrequent. Easier to do studies of crime using data from zip codes, census tracts, or even block-level data are not precise enough.

In the Table above, the data for the top five places: pawnshops, beer establishments, halfway houses, cheque-cashing stores, and subway stations; shows that crime drops off the farther you go from one of these five location types indicating the location itself is a crime center. In contrast, crime increases the farther you go from an outpatient substance abuse center indicating the center is not a source of the crime.

As shown in the table, a residential treatment program had the lowest crime rates of any of the locations studied.

Below is an annotated bibliography of relevant studies found. The articles are presented in order of publication with the most recent ones appearing first. Summary or illustrative information is quoted from each article so readers have the article's major conclusions in the authors' own words.

**Annotated Bibliography relating to Crime around
Substance Abuse Treatment Centers**

McCord E. (2014), *Using Location Quotients To Test for Negative Secondary Effects of Sexually Oriented Businesses*, Cityscape: A Journal of Policy Development and Research • Vol. 16, No. 1 pp. 351-358.

This is a geospatial study of crime in 250 foot buffers around 30 sexually oriented businesses in Louisville Kentucky. The study did not involve substance abuse treatment centers but is relevant because it is a clean example of what a crime association around a business type looks like when there is an association between crime and that business type or social location.

Kepple, N. J., & Freisthler, B. (2012, July), *Exploring the ecological association between crime and medical marijuana dispensaries*. Journal of Studies on Alcohol and Drugs, 73(4), 523-530. Abstract Retrieved on 1-23-2016 from <http://www.jsad.com/doi/10.15288/jsad.2012.73.523>
Can be purchased from journal.

Methods: An ecological, cross-sectional design was used to explore the spatial relationship between density of medical marijuana dispensaries and two types of crime rates (violent crime and property crime) in 95 census tracts in Sacramento, CA, during 2009. Spatial error regression methods were used to determine associations between crime rates and density of medical marijuana dispensaries, controlling for neighborhood characteristics associated with routine activities.

Results: Violent and property crime rates were positively associated with percentage of commercially zoned areas, percentage of one-person households, and unemployment rate. Higher violent crime rates were associated with concentrated disadvantage. Property crime rates were positively associated with the percentage of population 15–24 years of age. Density of medical marijuana dispensaries was not associated with violent or property crime rates.

Conclusions: Consistent with previous work, variables measuring routine activities at the ecological level were related to crime. There were no observed cross-sectional associations between the density of medical marijuana dispensaries and either violent or property crime rates in this study.”

T&M Protection Resources, (2012, February 10), *Public Safety Impact Assessment*, A Report prepared for Cuddy & Feder LLP, 230 Park Avenue, Suite 440, New York, NY 10169. Not available on the internet.

T&M Protection Resources studied crime incidents and the local impact associated with two residential substance abuse detoxification programs, one in Florida and one in New Jersey, and reviewed records of local agencies through conducting interviews with local officials and studying local records.

For example, the local records studied included:

- A sampling of internal incident reports from both the Lake Worth and Stirling facilities;
- An Event Summary of calls for service to the Palm Beach County Sheriff's Office for the 3 year time frame beginning on September 1, 2008 and ending August 31, 2011, that gives the incident location as the Lake Worth Sunrise facility (3185 Boutwell Rd.);
- Twenty-five (25) police reports prepared by the Palm Beach County Sheriff's Office as generated by the above calls for service;
- A summary of the total number of calls for service to the Palm Beach County Fire Rescue for the 3 year time frame beginning on September 1, 2008 and ending August 31, 2011, that gives the incident location as the Lake Worth Sunrise facility (3185 Boutwell Rd.);
- A summary of the calls for service to the Long Hill Township Police Department for the time frame beginning on September 1, 2009 and ending November 15, 2011, that gives the incident location as the Stirling facility (1272 Long Hill Rd.);
- Seventy-six (76) police general complaint reports prepared by the Longhill Township Police Department as generated by the above calls for service;
- A summary of the calls for service to the White Plains emergency response agencies that gives the incident location as the former Nathan Miller Nursing Home site located at 37 DeKalb Avenue, and
- Letters from neighboring community members

T&M Protection Resources concluded:

“None of the public safety officials interviewed by T&M identified Sunrise [the detoxification center studied] as a drain on municipal resources that would diminish the capabilities of their agencies to provide necessary services to other locations within the community.

The statements by each public safety official interviewed indicating that the existing Sunrise facilities are not a source of crime or disorderly behavior in the communities in which they exist or a drain on municipal resources are supported

by the calls for service data and available police reports we reviewed and analyzed.

The neighbors interviewed and the letters reviewed by T&M provided an image of Sunrise Detox Centers as good, quiet neighbors. One neighboring couple in Stirling (adjoining property) told us they considered Sunrise to be “great neighbors” and that other than staff coming and going, they don’t see or hear anyone from the facility. Another neighbor in Stirling indicated that the Sunrise facility is self-contained and has not impacted negatively on community public safety. This neighbor offered he would “rather have them (Sunrise) as a neighbor than a school.” These statements are strong evidence that the Sunrise facility is not a source of crime or disorderly behavior. “

Boyd, S. *et al.* (2012), *Use of a ‘microecological technique’ to study crime incidents around methadone maintenance treatment centers*, *Addiction*, Article first published online: 30 APR 2012. Also published in Vol. 107, Issue 9, pp. 1632–1638, September 2012. Abstract available at, retrieved on 1-23-2016 from, <http://onlinelibrary.wiley.com/doi/10.1111/j.1360-0443.2012.03872.x/abstract> Can be purchased from journal.

“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 300m 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 ... 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 ... and at night ... indicating higher crime counts further away.

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

Taniguchi T., & Salvatore, C. (2011, May), *Exploring the relationship between drug and alcohol treatment facilities and violent and property crime: A socioeconomic contingent relationship*. Security Journal advance online publication, 2 May 2011; doi: 10.1057/sj.2011.8. Abstract available at, retrieved on 1-23-2016 from <http://www.palgrave-journals.com/sj/journal/v25/n2/abs/sj20118a.html> Can be purchased from journal.

“Siting of drug and alcohol treatment facilities is often met with negative reactions because of the assumption that these facilities increase crime by attracting drug users (and possibly dealers) to an area. This assumption, however, rests on weak empirical footings that have not been subjected to strong empirical analyses. Using census block groups from Philadelphia, PA, it was found that the criminogenic impact of treatment facilities in and near a neighborhood on its violent and property crime rates may be contingent on the socioeconomic status (SES) of the neighborhood.

Paying attention to both the density and proximity of facilities in and around neighborhoods, results showed that the criminogenic impact of treatment facilities depended largely on neighborhood SES. Under some conditions more treatment facilities nearby was associated with lower crime. Reasons why the presumed criminogenic impact of treatment facilities appears only under some conditions were suggested.” Taniguchi and Salvatore also have an informative three-page bibliography.

Zorabedian, J. (2011, January 1), *Area Police Chiefs — Meth Clinics Don't Increase Crime Salem Patch*, Originally retrieved on 8-16-2012 from <http://salem.patch.com/articles/area-police-chiefs-meth-clinics-dont-up-crime> however as of 1-23-2016 the link no longer works

“Salem Police Chief Paul Tucker and Peabody Police Chief Robert Champagne said methadone clinics don't risk public safety...Salem Chief of Police Paul Tucker said Monday there is no evidence that methadone clinics increase crime, despite objections by some members of the community to the contrary... Beyond that, Tucker said he is aware of no evidence of increased crime surrounding clinic operations in nearby communities.

A survey of police departments that interact with methadone clinics in Lynn and Chelsea showed "a few minor police related issues, but most said there were no problems associated with the clinic operations," according to Tucker's letter.

Tucker told Salem Patch there is no appreciable threat to children from patients at methadone clinics.

"I don't have any information about kids being grabbed or approached," Tucker said. "In limited research, we didn't see any of that."

A record of police calls to a clinic operated by CSAC in Chelsea, and two methadone clinics operated in Lynn by other outfits, appears to back up the contention that the clinics don't increase crime."

Ally M.A, et al. (2011, May-June), *The impact of opening a heroin-assisted treatment clinic on the surrounding neighborhood*, Can J Public Health. 102(3):183-7. Abstract available at, retrieved on 1-23-2016 from <http://www.ncbi.nlm.nih.gov/pubmed/21717665> Can be purchased from journal.

Lasnier, B. et al. (2010), *A heroin prescription trial: Case studies from Montreal and Vancouver on crime and disorder in the surrounding neighbourhoods*. The International Journal of Drug Policy, 21(1), 28-35. Abstract available at, retrieved on 1-23-2016 from [http://www.ijdp.org/article/S0955-3959\(09\)00063-2/abstract](http://www.ijdp.org/article/S0955-3959(09)00063-2/abstract) Can be purchased from journal.

"This study evaluates whether the instauration of a heroin prescription trial (NAOMI) generated an impact on the occurrence of crime and disorder in surrounding areas. The clinical trial was initiated in Vancouver and Montreal in 2005, with the aim of assessing the benefits of heroin-assisted treatment (HAT) in Canada. While experiences from other jurisdictions where HAT trials have been implemented clearly demonstrate substantial crime reduction effects for trial participants, there is overall concern that HAT clinics - similar to other interventions aiming at problematic street drug users - may induce a 'honeypot' effect, leading to increases in crime and/or disorder problems in the vicinity of interventions. It has been argued that HAT clinics will attract undesirable behaviour associated with cultures of street drug use and thereby produce negative impacts on the community.

This study examined the incidence of crime and disorder in the Vancouver and Montreal sites before and during the NAOMI trial (2002-2006), using police calls for service and arrest data.

Data were analysed by autoregression analyses. The analysis suggested that most indicators remained stable during the pre- and implementation phase of the NAOMI trial in both sites.

While the attribution of observed crime and disorder trends to the specific clinical interventions in Montreal and Vancouver is difficult and many extrinsic factors may play a role, this study has not generated any clear evidence from institutional

police data to suggest increases or decreases in community-based problems associated with HAT programs in Canada.

Yu, S. (2009) *Bus stops and crime*, Doctoral Dissertation. Rutgers, The State University of New Jersey, Graduate School - Newark Electronic Theses and Dissertations. Abstract retrieved on 1-23-2016 from <https://rucore.libraries.rutgers.edu/rutgers-lib/26119/#citation-export>

This dissertation studied the location of crime and its relation to types of businesses and bus stops in Newark, New Jersey. It contains an excellent discussion of the technical problems and solutions encountered using geospatial analysis to analyze crime patterns. This study did not focus on behavioral health treatment programs but did find similar results to other studies in that crime locations were associated with bus stops and types of businesses such as convenience stores, and eating and drinking places.

Ratcliffe, J. (2012), *The Spatial Extent of Criminogenic Places: A Change point Regression of Violence around Bars*, *Geographical Analysis*, No. 44, pp. 302-320. Retrieved on 1-23-2016 from <http://onlinelibrary.wiley.com/doi/10.1111/j.1538-4632.2012.00856.x/abstract>

This study did not focus on behavioral health treatment centers, rather it focuses on bars and discusses at length the strong relationship between bars and criminal incidents. This study provides extensive confirmatory geospatial evidence of the impact of bars as a business on crimes.

McCord, E. and Ratcliffe, J. (2007), *A Micro-Spatial Analysis of the Demographic and Criminogenic Environment of Drug Markets in Philadelphia*, *The Australian And New Zealand Journal of Criminology*, Vol. 40, No. 1 pp. 43-63. Abstract available at, retrieved on 1-23-2016 from, <http://anj.sagepub.com/content/40/1/43.abstract> Can be purchased from journal.

“One of the different features of this study was the combination of social demographic and opportunity-related facilities to predict the location and size of drug markets. When explored at the city level, the social disorganisation variables appeared to respond more in the manner expected from theory. Yet we know from the location quotient analysis that there is clustering around opportunity-related, criminogenic locations. The spatial lag variable reinforces the notion from the location quotient analysis that drug arrests cluster in Philadelphia. The significance and high z value for this variable indicates that areas with high numbers of drug arrests are likely to be surrounded by other high drug arrest

areas. The most likely explanation is that not all opportunity facilities within a category are as bad as each other.

When aggregated to the city level, facilities such as beer establishments, pawnshops, and subway stations show evidence of drug arrest clustering. In reality, it is likely that there are good and bad liquor establishments, good and bad pawnshops, and subway stations that are located in areas unlikely to have drug markets. When concurrently analysed within the ZIP regression model, the influence of criminogenic locations (except beer establishments) is overshadowed by the greater consistency of demographic variables as predictors of drug market arrests across the city. The strength and importance of social disorganisation as the driving mechanism for the development of drug markets has been reinforced by this study.”

Boyd, S. et al. (2007, Summer), *Use of a “Microecologic Technique” to Study Crime Around Substance Abuse Treatment Centers*, *Social Science Computer Review*, Vol. 25 No. 2. pp. 163–173. Abstract available at, retrieved on 1-23-2016 from, <http://ssc.sagepub.com/content/25/2/163.abstract?rss=1> Can be purchased from journal.

This is a methodological article and describes the general techniques later used in the Boyd et al. 2012 article. This 2007 document does not contain research findings resulting from an application of the geocoding methodology.

“Whether substance abuse treatment centers affect neighborhood crime is hotly debated. Empirical evidence on this issue is lacking because of the difficulty of distinguishing the crime effect of treatment centers in high-crime areas, the inability to make before-and-after comparisons for clinics founded before computerized crime data, and the need for appropriate control sites. The authors present an innovative method (without an actual data analysis) to overcome these challenges. Clinic addresses and crime data are geocoded by street address. Crimes are counted within concentric-circular, 25-meter “buffers” around the clinics. Regression analyses are used to calculate the “crime slope” β among the buffers. A negative β indicates more crimes closer to the site. A similar process is used to evaluate crimes around control sites: convenience stores, hospitals, and residential points. This innovative technique provides valid empirical evidence on crime around substance abuse treatment centers.”

Jacobson, J (2006) *Do Drug Treatment Facilities Increase Clients` Exposure to Potential Neighborhood-Level Triggers for Relapse? A Small-Area Assessment of a Large, Public Treatment System*, *Journal of Urban Health*, Vol. 83 No. 2 pp. 150-161. Retrieved on 1-23-2016 from http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2527170/pdf/11524_2005_Article_9013.pdf

This study examined 22,707 clients discharged from 494 community-based outpatient and residential treatment facilities that received public funds during 1998–2000 in Los Angeles County. However, up to 20% of clients are exposed to markedly higher levels of disadvantage, violence, or drug activity where they attend treatment than where they live, suggesting that it is not uncommon for treatment locations to increase clients' exposure to potential environmental triggers for relapse.

“By comparing the medians and lower quartiles of the box plots, a consistent pattern is seen: Facility locations have the highest levels of disadvantage, violence, and drug activity, followed by home locations of patients and of the non-client population.” In other words, treatment centers in this Los Angeles study were located in lower socio-economic areas that had higher crime rates. The treatment facilities do not cause the crime. The crime exists because of the socio-economic conditions of the areas where the treatment programs are generally located.

2003 PricewaterhouseCoopers report for City of Oshawa, Canada

There are multiple newspaper accounts that in 2003 PricewaterhouseCooper did a report for the City of Oshawa studying crime around 11 methadone treatment clinics in Ontario and “found they had no impact on the surrounding crime rate. Unknown to neighbours, many Ontario pharmacies already dispense vast quantities of methadone but don't offer the counselling services that might mitigate its effects.” See news article retrieved on 1-23-2016 from <http://www.theglobeandmail.com/news/toronto/whats-wrong-with-a-new-methadone-clinic-on-a-quiet-toronto-street/article585418/>

A copy of the report is difficult to obtain since it is not on the City of Oshawa and PricewaterhouseCooper websites.

Freitag, Michael (November 13, 1989) *Fears of Neighbors Frustrate a Drug-Care Center*, *NY Times*, Retrieved on 1-23-2016

<http://www.nytimes.com/1989/11/13/nyregion/fears-of-neighbors-frustrate-a-drug-care-center.html>

This newspaper story recounting neighborhood opposition to the expansion of an existing program contained the reference to a study done on the impact of the program. “In fact, Mr. Armstrong noted that a report prepared by the substance-abuse division in 1981 found that a residential drug-treatment center had only a minimal impact on the Long Island community of Melville. In the three years