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Looking for the uninsured in Massachusetts? Check opioid dependent persons seeking detoxification

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Abstract

Background—We examined the rate of uninsurance among persons seeking detoxification at a large drug treatment program in Massachusetts in 2013, five years after insurance mandates.

Methods—We interviewed three hundred and forty opioid dependent persons admitted for inpatient detoxification in Fall River, Massachusetts. Potential predictors of self-reported insurance status included age, gender, ethnicity, employment, homelessness, years of education, current legal status, and self-perceived health status.

Results—Participants mean age was 32 years, 71% were male, and 87% were non-Hispanic Caucasian. Twenty-three percent were uninsured. In the multivariate model, the odds of being uninsured was positively associated with years of education (OR = 1.22, 95%CI 1.03; 1.46, $p < .05$), higher among males than females (OR = 2.63, 95%CI 1.33; 5.20, $p < .01$), and inversely associated with age (OR = 0.94, 95%CI 0.90; 0.98, $p < .01$).

Conclusion—Opioid dependent persons recruited from a detoxification program in Massachusetts are uninsured at rates far above the state average. With the arrival of the Affordable Care Act, drug treatment programs in Massachusetts and nationally will be important sites to target to expand health coverage.

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Contributors

Author Stein is the Principal Investigator of the project. He devised the study design, interpreted the data, and wrote the initial draft of the manuscript. Author Bailey is the study co-Investigator. She devised study design and substantially edited the manuscript. Author Thurmond supervised data collection and substantially edited the manuscript. Author Paull substantially edited the manuscript.

Conflict of Interest

No conflict of interest reported.

Author Disclosures

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Keywords

Insurance; Detoxification; Opioid; Affordable Care Act

1. INTRODUCTION

Following comprehensive health reform legislation that included Medicaid expansion in 2006, and insurance mandates for employers and individuals, with tax penalties for persons without coverage in 2008, Massachusetts has achieved near universal insurance coverage (Long, 2008; Long and Masi, 2009; Long et al., 2009). In 2010–11, the rate of uninsurance in Massachusetts was 4.8% among non-elderly adults, compared to 15.1% nationally (Cohen and Martinez, 2012.). One goal in Massachusetts, as well as national health care reform, is to reduce racial/ethnic and socioeconomic disparities in health care. Whether the dramatic improvements in coverage have extended to high-risk subpopulations in Massachusetts should be of interest to policy-makers.

One group at risk for high levels of health service use, and therefore in particular need of medical insurance, is opioid-dependent persons. Illicit drug-using individuals use fewer outpatient services, but more expensive emergency department and inpatient services than non-addicted persons (French et al., 2000; Kerr et al., 2005; Palepu et al., 2001; Stein and Sobota, 2001). The disease burden of this group is enormous, related to transmission of infectious diseases, overdose, trauma, chronic medical conditions, psychiatric disorders, as well as a myriad of acute medical problems such as endocarditis and skin and soft tissue infections, all associated with drug injection (Stein, 1999; Stein and Sobota, 2001). Opioid users are often socioeconomically challenged and, without insurance, preventive care or long-term substance abuse treatment is difficult to establish (Mark et al., 2001; Masson et al., 2002).

Medically-assisted inpatient drug withdrawal, or detoxification, is a common initial treatment for persons with opioid dependence attempting to stop illicit use of heroin or non-prescribed opioids (Carrier et al., 2011; Mark et al., 2002; Substance Abuse and Mental Health Services Administration, 2004) and is typically covered by insurance. In this study, we examined the rates of uninsurance among persons seeking detoxification at a large treatment program in Massachusetts five years after the initiation of insurance mandates.

2. METHODS

2.1 Participants

Between February, 2013 and July, 2013, consecutive persons seeking opioid detoxification were approached at the time of admission to Stanley Street Treatment Addiction and Recovery, Inc. (SSTAR) in Fall River, Massachusetts to participate in a survey research study. SSTAR's program in Southeastern New England has 38 beds and is a 24-hour medically supervised treatment facility that provides evaluation and withdrawal management. Services are delivered by nursing and counseling staff under a physician-approved protocol with 24-hour physician and psychiatric consultation available. Eighty percent of admissions are related to opioid dependence, and the mean length-of-stay for these admissions is 5.9 days.

To be eligible, participants had to be English-speaking opiate users 18 years or older, living in Massachusetts, and able to provide verbal informed consent as approved by the Butler Hospital Institutional Review Board. Patients were not paid for participation. Out of a total of 441 patients admitted to SSTAR during the recruitment period, 369 were opioid users.

Seventeen refused study participation and twelve were ineligible because they lived outside Massachusetts. The remaining 340 persons received a face-to-face interview.

2.2 Measures

The primary outcome was self-reported health insurance. Response options included private, public (Medicaid, Mass Health) or uninsured. Predictors included: age, gender, race or ethnicity, employment (part or full-time vs. unemployed) homelessness, years of education, and pending legal issues (probation, parole, pre-trial release). Participants were asked if they had had an outpatient primary care visit in the past year, and self-rated health status was determined by the SF-12 item “In general, would you say your health is excellent/very good/good/fair/poor”; the SF-12 is a measure designed to assess health-related quality of life (HRQL; Ware et al., 1996). Using reports from Massachusetts’ public insurance programs, we reviewed the past year insurance status of those participants who reported being uninsured at the time of the interview.

2.3 Analytical Methods

Descriptive statistics were used to summarize the characteristics of the sample. Bivariate and multivariate logistic regressions were used to evaluate the association of selected correlates with the likelihood of being uninsured. Additionally, we used logistic regression to evaluate the association between insurance status and seeing a primary care physician during the prior 12 months. Tests of significance and 95% confidence intervals were based on robust Huber-White variance estimators. Analyses used Stata 10.1 (StataCorp, 2008).

3. RESULTS

Participants averaged 31.9 ($\pm$ 8.6) years of age, 241 (70.9%) were male, and 297 (87.4%) were non-Hispanic White, eight (2.4%) were African-American, 22 (6.5%) were Hispanic, and 13 (3.8%) were of other racial or ethnic origins (Table 1). Ethnicity was dichotomized to contrast non-Hispanic Whites to all other racial or ethnic minorities in subsequent analyses. Twenty-eight (8.2%) reported they had spent at least 1 night on the street or in a shelter in the past 90 days. On average, participants had completed 11.6 ($\pm$ 1.9) years of education, 37 (10.9%) were currently employed, and 90 (26.5%) had pending legal issues. Ten (2.9%) reported that they had private insurance, 253 (74.4%) had public insurance and 77 (22.6%) had no insurance. Eleven (3.2%) described their current health as excellent, 46 (12.9%) as very good, 138 (40.6%) as good, 124 (36.5%) as fair, and 23 (6.8%) as poor; the mean score on the 5 point scale was 3.3 ($\pm$ 0.9). Just over half (53.2%) said they had seen a primary care physician in the past year.

Table 2 gives unadjusted (bivariate) and adjusted (multivariate) associations between selected correlates and the likelihood of being uninsured. In the multivariate model, the odds of being uninsured was inversely and significantly associated with age (OR = 0.94, 95%CI 0.90; 0.98, p < .01), higher among males than females (OR = 2.63, 95%CI 1.33; 5.20, p < .01), and positively associated with years of education (OR = 1.22, 95%CI 1.03; 1.46, p < .05). Bivariate analysis indicated that perceived quality of health was significantly associated with insurance status; poorer perceived health quality was associated with a lower likelihood of having medical insurance (OR = 0.71, 95%CI 0.54; 0.93, p < .01). However, this association was not statistically significant after adjusting for demographic characteristics and other correlates in the multivariate model.

In auxiliary analysis, we also examined the association between seeing a primary care physician in the past 12 months and insurance status. After adjusting for age, gender, race, education, homelessness, employment status, legal status, and perceived quality of health, persons with health insurance were about 3.04 (95%CI 1.67; 5.55, p < .001) times more

likely to report seeing a primary care physician in the past year. Other significant predictors of seeing a primary care physician were older age (OR = 1.04, 95%CI 1.01; 1.07, $p < .05$), being female (OR = 0.48, 95%CI 0.28; 0.83, $p < .01$), and higher educational attainment (OR = 1.22, 95%CI 1.06; 1.41, $p < .05$).

Among the 77 persons who reported having no insurance, 35 (45.5%) had insurance in the past year. On average, these 35 persons had insurance for 198.9 (SD 109.4, Median=198) days. The overall mean number of days for all 77 persons was 90.4 (SD 123.7) days. Comparing those insured in the last year with those uninsured for more than a year, there were no significant differences in age, race, education, employment or perceived quality of health. Men (37.7%) were significantly ($p=.003$) less likely to report last year insurance than women (80%).

4. DISCUSSION

In recent years, Massachusetts has significantly reduced the level of uninsurance among its residents, which has improved access to a personal physician (Pande et al., 2011) and relieved the risk of bankruptcy due to medical expenses. Yet success in overall expansion of insurance has not fully reached those persons seeking drug treatment services for opioid dependence. Persons recruited from this detoxification program with a wide catchment area in Southeastern Massachusetts have uninsurance rates far above the state average. In this sample, men and younger persons were more likely to lack insurance, similar to national trends.

Having medical insurance was associated with seeing a primary care provider in the past year. Such visits could offer preventive care, and early care for medical problems that if untreated could lead to more expensive and/or complicated treatment at emergency department visits or hospitalization. In the case of opioid dependence, integration with primary care and the establishment of a long-term doctor-patient relationship creates an opportunity for the use of medication-assisted therapies such as buprenorphine (Fiellin, 2007; Saitz et al., 2013; Stein et al., 2005); subsequent abstinence then creates other opportunities to improve health.

Lower income adults, including many substance users, are also more likely to report difficulty in finding a provider, perhaps due in part to lack of insurance (Long, 2009). A substantial literature finds persistent socioeconomic disparities even among those with health coverage (Emmons et al., 2009; Kuo et al., 2008; Trivedi et al., 2006).

Unexpectedly and counter-intuitively, years of education were also associated with uninsurance. We speculate that persons with higher education may have higher incomes and the ability to pay required medical bills out-of-pocket; relatedly, they may choose not to seek medical insurance due to the premium cost and their estimation that a high-cost medical event is unlikely. It is also possible that persons with higher education were more likely to have been recently employed and expect to be employed again in the near future, regaining insurance at that time.

Nearly half of the uninsured had been insured by the state's main public coverage programs at some time during the past year. This suggests that a subgroup of our uninsured consists of persons who may be "churning," losing and regaining insurance a short time and later, as well as "long term departures," those who remain without public coverage for at least six months (Seifert et al., 2010; Trenholm et al., 2011). Churning can be due to income or job volatility, an enrollee not wanting to or being unable to pay required premiums. Disenrollment may not be due to an individual's inaction; disenrollment may be automatically activated by insurers based on data form mismatches, or incomplete change of

address forms or requested verifications. Churning and long-term departures can be administratively costly to states and disrupt people's access to health care. Those who experience an interruption in coverage tend to underuse preventive care (Short et al., 2003). For those who are without coverage only briefly, available premium subsidies could be more widely publicized and programs providing transitional coverage could be designed. Reports indicate that while nearly 40% of adults nationally are without insurance for periods of less than four months (Cutler and Gelber, 2009), long uninsured spells are associated with lower socioeconomic status, racial or ethnic minority status, and lower educational attainment (Swartz et al., 1993).

More than half of the opiate dependent persons in our study who were uninsured had been uninsured for at least a year; some may never have been insured. Most adults in Massachusetts below poverty income level should be eligible for a health care plan with no premium to pay, and some would be eligible for Medicaid, also with no premium. However, outreach efforts may still be needed to engage those eligible for these programs. Other studies in Massachusetts have found that the majority of the uninsured are employed, and therefore may have had access to employer sponsored insurance, while only one in ten of our sample reported current employment making public insurance the only available option for most study participants (Nardin et al., 2012).

Our study had several limitations. We recruited from only one type of drug treatment program in one location, and recruited only opioid dependent persons. Second, our sample was primarily Caucasian and had little racial/ethnic variation. However, because minorities and low-income adults are overrepresented among the uninsured in most studies (Institute of Medicine, 2003), we might expect even higher rates of uninsurance in minority communities of drug users. Third, we did not know why participants became or remained uninsured; other research has highlighted that the most common reason for being uninsured is cost (Cohen and Martinez, June 2012.). Even when state subsidized, premiums for the working poor may be unaffordable. Nardin et al. (2012), studying the uninsured seeking care at a Massachusetts emergency room, reported that cost, job loss, and lapsed paperwork were the most common reasons for uninsurance, but loss of spouse's or parents' insurance, insurance denial, and belief that they did not need insurance were among additional reasons. It is possible, however, that amidst the often chaotic lives of drug users (Hayaki et al., 2005), a sense of marginalization and concerns about income reporting may prevent this group from seeking insurance. Fourth, we also do not know how long those with insurance had been insured. Of note, even if the 35 persons who had been insured during the past year had not lost their insurance, the uninsurance rate in our cohort would have been 12.3%, far higher than the state average. Finally, because each study participant was interviewed only once, we cannot discern temporal factors contributing to uninsurance.

We are at the dawn of the Affordable Care Act. Various factors that have assisted in the initial expansion of health insurance in Massachusetts are not applicable on the national scale, including a low baseline rate of uninsurance, a lower undocumented immigrant population than other states, and an established health care infrastructure including an extensive community health network. Despite these advantages, our data and work by others who study persons with behavioral health disorders (Capoccia et al., 2013, 2012) demonstrate that there remain subpopulations of uninsured persons, and this will certainly be true when insurance expansion begins in other states.

These data offer timely insights into efforts to confront health care inequality. Our findings suggest that there may be a lack of infrastructure within pockets of underserved communities to promote outreach and enrollment in health plans, and that a concerted outreach effort in drug treatment settings may help to identify those who remain uninsured

after health reform. There is also the need for systemic policy reform in the monitoring of retention in public insurance programs with attention to insurance renewal simplification, mechanisms to limit automatic disenrollment, and other policies that limit disruptions in coverage (Capoccia et al., 2013).

Being uninsured is associated with increased mortality rates (Wilper et al., 2009) and drug users are already high risk of medical complications and premature death (Hser et al., 2001). Drug treatment programs will be important sites to identify and enroll one, high-risk, underserved group. Ongoing monitoring of access and affordability will be important to ensure that health reform improves equity.

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Table 1

Background Characteristics (n = 340)

	Mean (SD) or n (%)
Age	31.9 ($\pm$ 8.6)
Gender (Male)	241 (70.9%)
Non-Hispanic Caucasian (Yes)	297 (87.4%)
Homeless (Yes)	28 (8.2%)
Employed Part- or Full-Time (Yes)	37 (10.9%)
Education (Years)	11.6 ($\pm$ 1.9)
Pending criminal charges (Yes)	90 (26.5%)
Perceived Health	3.3 ($\pm$ 0.9)
Uninsured	77 (22.6%)
Seen a Primary Care Physician (Yes)	181 (53.2%)

Table 2

Correlates of Being Uninsured (n = 340).

Correlate	Unadjusted OR (95%CI)	Adjusted OR (95%CI)
Age	0.95 ^{**} (0.91; 0.98)	0.94 ^{**} (0.90; 0.98)
Gender (Male)	1.98 [*] (1.07; 3.69)	2.63 ^{**} (1.33; 5.20)
Non-Hispanic Caucasian (Yes)	2.48 (0.94; 6.54)	2.30 (0.83; 6.41)
Homeless (Yes)	0.38 (0.11; 1.29)	0.33 (0.09; 1.21)
Employed Part- or Full-Time (Yes)	1.09 (0.49; 2.42)	0.77 (0.32; 1.89)
Education (Years)	1.16 [*] (1.01; 1.33)	1.22 [*] (1.03; 1.46)
Pending criminal charges (Yes)	1.03 (0.58; 1.82)	0.92 (0.51; 1.65)
Perceived Health	0.71 [*] (0.54; 0.93)	0.78 (0.58; 1.05)

*
p < .05**
p < .01