Introduction

The population of the United States’ prisons and jails increased 500% over the last 40 years, making it the world leader in incarceration. Of the nearly 2.2 million individuals incarcerated, an estimated 300,000 are living with a mental illness each year (Sentencing Project, 2018). Housing those with mental illness has proven to be a costly endeavor. As far back as 1996, the Department of Justice has estimated an annual cost of $1.4 billion to incarcerate individuals with a serious mental illness diagnosis (Hurl, 2001).

Given an estimate of 300,000 incarcerated individuals with a mental illness, this results in a cost of around $47,000 per inmate annually, compared to the national average of $20,100 per inmate annually (Bureau of Justice Statistics, 1996).

Variables(s) of Interest
Total Mental Health Expenditures
Expenditures
Inpatient Mental Health Expenditures
Community Mental Health Expenditures

Environmental Variables
Unemployment
Pensions
Legislature Composition: Democratic
Legislature Composition: Republican
Governor Democratic Party

Demographic Variables
Black
Hispanic
Age 18 and Older
Age 65 and Older
Median Age
Sex Ratio

Illness to Incarceration: Imprisonment as a False Substitute to Inpatient Mental Health Care
Grace Malone
Dr. Matthew Harris, Faculty Advisor

Abstract

I contribute new evidence regarding the substitution of incarceration for inpatient mental healthcare. I estimate the empirical relationship between state-level mental health care expenditures and incarceration rates using standard panel data methods. Results indicate increased public expenditures on inpatient mental health reduce the number of imprisoned individuals. Providing funding for one additional inpatient bed per 100,000 population reduces incarceration rates by 0.95 per 100,000. However, if we just consider incarceration and inpatient mental health as a way to remove individuals from society, incarceration saves the state $220,000 per-prisonper year. Results indicate that states have the financial motivation to substitute imprisonment for incarceration, despite their lack of substitutability from a therapeutic standpoint.

Research Objectives

1. Review the policy background of treatment of mental illness and incarceration in the United States
2. Estimate the variables used by state policymakers to determine a successful model of predicting incarceration
3. Identify the impact of per capita inpatient mental health care spending on incarceration rates at the state level

Methods

I examine the empirical relationship between state mental health expenditures and incarceration using several regression models. In the absence of something like a natural experiment, recovering a true causal estimate is not feasible. However, by using several different specifications such as fixed effects, first differences, and lagged dependent variables, we are in essence able to estimate bounds around likely values of the true effect. The preferred specification, an Arellano-Bond approach, yields a result approximately in the middle of our estimated bounds.

Results

Using the Arellano-Bond Estimator as the preferred specification (column 4), we find that inpatient state capita mental health expenditures do have a significant effect on incarceration rates. Specifically, for every $10 increase in per capita expenditure, over 8 fewer people are incarcerated out of every 100,000 during the subsequent year (p < 0.05).

Conclusion

Results suggest that increases in inpatient mental healthcare expenditures reduce incarceration rates. Take the case of Tennessee, with an average yearly cost per inmate of $23,468 (Vigo, 2015), a population of 6,591 million, and an average inpatient stay length of 8 days at a cost of $5,700 (Piper, 2011). Suppose the government increases per capita state mental health expenditures by $1 annually. This equates to $6,591 million in new inpatient mental health funding. This funding, in people terms, equates to increased capacity in inpatient care for 25.3 people per year. With this funding, 28.9 people will stay out of prison. Therefore, the people effect is greater than 1:1 (1.14:1). However, the state spends $6,591 million to create capacity for 25 people, keeping 29 out of jail to save $680,572. The state fails to see a monetary return on investment in the short run, and therefore can save money by substituting prisons for mental health hospitals, at the expense of other societal outcomes such as employment, violence, and more.

From a policy perspective, this research suggests that increasing expenditures for inpatient mental health treatment facilities has a large effect on incarceration. Given that the costs of incarcerating individuals with serious mental illnesses are high, the slight reduction in imprisonment may result in valuable savings to the state. Thus, state governments seeking to reduce costs may consider higher investment in medical inpatient treatment as a means of addressing mental illness.

Additionally, further analysis indicate that inpatient treatment has a greater reduction effect on incarceration than does community mental health expenditures, suggesting a focus on inpatient expenditures is most suitable in this arena.

Sources


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Variable Summary Statistics

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The number of state hospital beds has dropped from 339 per 100,000 population in 1955 to 22 per 100,000 in 2000 as funding priorities shifted away from inmate care (Manderscheid, Atty, Mala et al., 2002). From 1978 to 2000 the total number of inmates per 100,000 increased from 209 to 708 (Bureau of Justice Statistics). These simultaneous trends seem to suggest an interplay between inmate care and incarceration.