

Thesis Project Portfolio

Analyzing Efficacy of Home Electronic Incarceration on Return-to-Custody Rates for Inmates During the COVID-19 Pandemic

(Technical Report)

Effects of Solitary Confinement on the Mental Health of Prisoners with a Previously Diagnosed Mental Illness

(STS Research Paper)

An Undergraduate Thesis

Presented to the Faculty of the School of Engineering and Applied Science
University of Virginia • Charlottesville, Virginia

In Fulfillment of the Requirements for the Degree
Bachelor of Science, School of Engineering

Livia Hughes

Spring, 2022

Department of Systems and Information Engineering

Table of Contents

Sociotechnical Synthesis

Analyzing Efficacy of Home Electronic Incarceration on Return-to-Custody Rates for Inmates During the COVID-19 Pandemic

Effects of Solitary Confinement on the Mental Health of Prisoners with a Previously Diagnosed Mental Illness

Prospectus

Sociotechnical Synthesis

Technical Report

Due to the onset of the COVID-19 pandemic, local courts were forced to adjust incarceration practices in order to reduce jail occupancy and limit the spread of the virus, resulting in Albemarle-Charlottesville Regional Jail (ACRJ) increasing the use of Home Electronic Incarceration (HEI). HEI is a program designed to allow carefully selected individuals to serve their sentences within the boundaries of an approved location, monitored by ACRJ. In response to this, the Technical Project aimed to investigate whether increased use of HEI had an impact on the return to custody (RTC) rates at ACRJ.

Our analysis relied on comprehensive, quantitative analysis of booking data provided by ACRJ, along with continued insight and guidance from Region Ten Community Services (R10), a provider of mental health resources, Offender and Aid Restoration-Jefferson Area Community Corrections (OAR-JACC) and the Blue Ridge Area Coalition for the Homeless (BRACH). In the Technical Project, we present the results of our analysis on two areas of focus: HEI sentences pre- vs. post-COVID, and HEI vs. non-HEI individuals during and since the onset of COVID. We define pre-COVID as any date before April 1, 2020, and post-COVID as any date including and after it. In addition, we collaborated with key community stakeholders to gain a deeper understanding of the state of the Albemarle-Charlottesville criminal justice system as it recovers from the pandemic.

Our findings indicate that prior to the pandemic, HEI was reserved for frequent offenders serving felony charges. However, after the pandemic began, ACRJ began placing individuals on HEI who were more representative of the jail population as a whole in terms of prior crime history and the mix of misdemeanor and felony offenders. We also found that individuals on HEI

are incarcerated for significantly longer periods of time for comparable offenses than those who serve their sentence in ACRJ. Moreover, our analysis found that HEI results in lower RTC rates than custodial incarceration sentences, both pre- and post-COVID, and when split between misdemeanor and felony offenses. Our analysis provides strong evidence for the efficacy of HEI as an alternative to incarceration at ACRJ and offers insights into areas for future research and policy interventions.

STS Research Paper

The STS Paper investigates the long-lasting physiological and psychological health repercussions of placing prisoners in solitary confinement, as well as suggesting reforms that need to be made to the practice. Over one million people in the United States (U.S.) are incarcerated in federal and state prison systems, with more than 50 percent of these prisoners having a history of mental illness, however, only 6 percent of these individuals receive professional treatment (Carson, 2022; Wang, 2022). Additionally, nearly 50,000 prisoners are placed in solitary confinement with between 30 and 50 percent of these individuals having a mental illness (Bertsch *et al.*, 2022; Halvorsen, 2018). Recent studies have shown that solitary confinement is equivalent to a form of torture, yet it remains a standard practice in the U.S..

To gain a thorough understanding of state and federal prisons, the practice of solitary confinement, and mental illnesses, the research paper uses the methods of history and philosophy, and policy analysis. The research paper also utilizes the Science, Technology, and Society (STS) framework of risk analysis to explore solitary confinement in regard to the prisoners, employees, policy makers, and the practice as a whole. The argument considers two overarching categories: individual stakeholders and the systemic negligence towards mental health in prisons.

Through research into these individuals and the structure of the current system itself, the paper reveals the high-risk environment of solitary confinement and how it ultimately does not function to increase safety at prisons. Three areas require significant reform regarding solitary confinement in U.S. prisons: standardization of solitary confinement policies, introduction of mental health resources for those in solitary confinement, and implementation of time out of cell each day. Standardizing policies across the U.S. would decrease the prevalence of prisoners with mental illness in solitary confinement and improve post-release outcomes. This research emphasizes that reforms are urgently needed to account for the overall well-being of prisoners, particularly those with severe mental illnesses.

Works Cited

- Bertsch, L., Kempf, K., Fogg, S., Resnik, J., & Taylor, J. (2022, August 24). *TIME-IN-CELL: A 2021 SNAPSHOT OF RESTRICTIVE HOUSING*. Yale Law School. Retrieved February 7, 2023, from https://law.yale.edu/sites/default/files/area/center/liman/document/time_in_cell_2021.pdf
- Carson, E. A. (2022, December). *Prisoners in 2021 – statistical tables*. Bureau of Justice Statistics. Retrieved February 6, 2023, from <https://bjs.ojp.gov/library/publications/prisoners-2021-statistical-tables>
- Halvorsen, Ashley. (2018, February 27). *Solitary Confinement of Mentally Ill Prisoners*. University of Southern California Gould School of Law, Southern California Interdisciplinary Law Journal.
- Wang, L. (2022, June). *Chronic punishment: The unmet health needs of people in state prisons*. Prison Policy Initiative. Retrieved February 6, 2023, from <https://www.prisonpolicy.org/reports/chronicpunishment.html#mentalhealth>