# Thesis Portfolio

**Linkages Between Community Mental Health Services, Homelessness, and Inmates and Probationers with Severe Mental illness: An Evidence-Based Assessment**
(Technical Report)

**Analyzing the Assessment of Severe Mental Illness in Jails and Prisons**
(STS Research Paper)

An Undergraduate Thesis
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The Faculty of the
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Bachelor of Science in Systems and Information Engineering

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SOCIOTECHNICAL SYNTHESIS

LINKAGES BETWEEN COMMUNITY MENTAL HEALTH SERVICES, HOMELESSNESS, AND INMATES AND PROBITIONERS WITH SEVERE MENTAL ILLNESS: AN EVIDENCE BASED ASSESSMENT
with Emma Hand, Claire Deaver, Noah O'Neill, Callie Weiler, Henry Bramham, Sean Domnick
Technical advisor: Michael Smith, Department of Engineering Systems and Environment

ANALYZING THE ASSESSMENT OF SEVERE MENTAL ILLNESS IN JAILS AND PRISONS
STS advisor: Kent Wayland, Department of Engineering and Society

PROSPECTUS
Technical Advisor: Michael Smith, Department of Engineering Systems and Environment
STS advisor: Kent Wayland, Department of Engineering and Society

The common problem that both my technical and STS research address is the issue with the identification and treatment of incarcerated individuals that suffer from severe mental illnesses. Individuals with severe mental illnesses are overrepresented in jails and prisons across the United States, in fact it is estimated that the prevalence of mental disorders in adults is two to four times higher for those who are incarcerated than for those who are not. The sheer volume of incarcerated individuals that suffer from a severe mental illness poses serious risks to both the population themselves and the jails and prisons who hold them. Risks to the mentally ill population include the lack of mental health services offered in jails as well as increased likelihood of sexual victimization. Due to these risks, it is imperative that these individuals be accurately identified and eventually linked to mental health treatment services. In order to address the needs of this population and help them receive mental health treatment, a key first step is to administer some sort of screening assessment in jails and prisons to accurately identify these individuals.

The technical portion of my research focuses on utilizing evidence-based practices to characterize the local mentally-ill inmate population in the Charlottesville area. This is a continuation of an ongoing project of over 15 years that aims to help better inform Charlottesville decision makers on the community's mentally ill population. The ongoing project has had a large impact on the Charlottesville community as it has led to the development of new program initiatives including the 2018 Therapeutic Docket, which is a program designed for individuals with severe mental illness as a sentencing alternative to probation. In order to conduct this research, the team partnered with several community organizations including: Region Ten Community Services (R10), Thomas Jefferson Coalition Area for the Homeless (TJACH), Albemarle Charlottesville Regional Jail (ACRJ), Virginia Department of Corrections

(VDOC), and Jefferson Area Community Corrections (OAR) in order to grasp a holistic view of the mentally ill inmate population and which community resources they utilize. Partnering with these different organizations allowed our team to retrieve data from them, which we then cleaned and merged in order to perform analysis that spanned multiple different community agencies. Some of the key results from this project indicated that most individuals, about 70%, who were booked in at the ACRJ and received services at R10 were seen at the jail first. This finding indicates the fact that the jail is often used as a diagnostic tool for mentally ill individuals. Key findings such as these are presented to a group of local Charlottesville decision makers in order to help better inform them of this population so they can make local policy changes. In an even broader sense these findings are used to demonstrate the importance of researching mentally ill populations in jails and prisons throughout the country.

The STS portion of my research addresses the question, "Have the instruments used to assess mental illnesses in jails and prisons evolved due to the changes in public conception of mental illness?" This question was chosen in order to analyze the issue of the overrepresentation of mentally ill individuals in jails and prisons as well as the efforts that have been done in order to address this problem. One of the main efforts over the past two decades has been the development of screening assessments to be administered in jails and prisons in order to identify incarcerated individuals that suffer from a severe mental illness. The focus of my research has two main components, the first being the development, evolution, and prevalence of a common screening instrument developed in 2002 titled the Brief Jail Mental Health Screen (BJMHS). The second focus of my research is the public conception and knowledge of mental illness, and how the sentiment towards mentally ill individuals has changed over time in society. By analyzing these two concepts in parallel, comparisons can be made to indicate that as the knowledge and

awareness surrounding mental illness has increased, developments made by outside researchers have simultaneously been made to instruments such as the BJMHS in order to ensure that this population is accurately identified and eventually treated for. The parallel analysis performed in this research indicates why the BJMHS and society's knowledge and opinion regarding mental illness cannot be viewed as sole entities, but as a combined sociotechnical system.

The technical and STS research that I performed this year were very enlightening, engaging, and hopefully helped create a larger impact. Through both of these projects I learned a lot more about the prevalence of severely mentally ill individuals in jails and prisons, how long this has been an issue, and the efforts that have been done to solve this problem. In my technical research I was able to present the analysis my team and I had done to local Charlottesville decision makers in order to help better inform them of the mentally ill population so they can make appropriate policy and programming decisions. Through my STS research, I was able to take a deeper look at the assessment of mental illness in jails and prisons using the BJMHS as a case study, which is the instrument that the ACRJ uses in Charlottesville, as well as the public's conception and sentiment towards the mentally ill population. For researchers who may perform a continuation of this sort of work, it would be very interesting to broaden the scope in both the technical and STS sense. In the technical portion of work, it would be helpful to obtain data from more jails and community resources throughout Virginia to see if the same findings hold for a larger area and population. For the STS research, it would be interesting to analyze other instruments in addition to the BJMHS and potentially compare the analysis to see if similar developments were made alongside the changes in public opinion.