

CRIMINAL JUSTICE LAB

EMBEDDING UPSTREAM BEHAVIORAL HEALTH SOLUTIONS INTO THE CRIMINAL JUSTICE PROCESS

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Across the country, millions¹ of individuals come into contact with the criminal justice system not because of criminal behavior but, rather, because they struggle with mental illness and substance use disorders.² Many of these individuals repeatedly cycle through our jails, often because they are never provided with services that can address their underlying problems. After all, jails and prisons incarcerate and punish but rarely address underlying issues. Because we fail to safely address significant, underlying drivers of crime, we pay an enormous cost—both human and financial.

Until now, we have not given the police—or other first responders—the tools they need to successfully identify individuals who suffer from mental illness and substance use disorders. Without this information, there is no way to know objectively who could be safely diverted to treatment that, according to research, stands as one of the few proven pathways to reduce crime and re-arrest.³ Today's criminal justice system puts enormous pressure on police officers to follow the traditional law enforcement path of identifying someone who has broken the law and arresting them. When an officer deviates from that model, they are relying on their subjective

judgment and assuming personal and professional responsibility and risk in doing so.

For these reasons, we believe a simple, accurate screening tool that can be administered in the field can dramatically move the needle on diversion and future criminal justice involvement by providing officers with an objective basis on which to identify individuals with behavioral health issues.

Many police departments have begun thinking about new ways to address crime's underlying drivers instead of waiting for the next crime to occur, and many are rethinking how they respond to individuals with behavioral health issues. We have been fortunate to cultivate partnerships with Indianapolis, Indiana, and McLean County, Illinois, two jurisdictions that have shown a strong desire for change to their policing practices. These two partnerships have been instrumental in the success of our project. We hope this tool will be viewed within the broader national framework to develop alternative responses by police and provide training and tools for de-escalation.

CREATING THE HEALTHLINK DIVERSION TOOL

Early in her tenure as New Jersey Attorney General overseeing the Camden Police Department, Criminal Justice Lab's founder Anne Milgram realized the large intersection between public safety and public health. A majority of all Camden arrestees—67 percent—made a trip to the hospital emergency room at least once during the study's timeframe, with 54 percent of arrestees making five or more visits during the same timeframe. There was a clear relationship in the data between the high use of hospital emergency rooms and frequent arrests.⁴ This research has driven many of the Criminal Justice Lab's research priorities and led us to wonder what type of tool we could build to integrate treatment for underlying upstream drivers of crime into the criminal justice process itself.

To achieve this goal, we first convened experts in mental illness and substance use disorders to see if we could design a short questionnaire with high predictive validity that police officers could use to identify and divert eligible individuals. The tool's requirements at the outset were that it could be short and easy enough to administer in the field without extensive training. While many instruments exist to diagnose mental illness, substance use disorders, and suicidality in a medical setting with high accuracy, they are far too long and detailed for a police officer to use in the field. Moreover,

the vast majority of existing tools require administration by a trained health-care professional, which makes them unsuitable for use by law enforcement. Our team's goal was to design a tool that would require minimal training to administer so the cost and time to train police officers would not be prohibitive to its implementation. Our team of experts successfully developed a ten-question tool that can be rapidly administered by police officers in the field to flag individuals who could safely benefit from diversion out of the criminal justice system and into behavioral health treatment.

One challenge we had to tackle at the outset was being diligent to choose language to solicit honest answers and ensure the questions did not sound accusatory. We wanted to place all the questions in a framework of health rather than criminal behavior. This is challenging when the tool's administrator is not in a health setting. As this relates to questions about drug use, we have observed that certain groups are more reticent to reply honestly about an illegal activity to a police officer based on negative historical and personal interactions with law enforcement. The more distrust between an individual and the police the greater chance they will not be forthcoming about behavioral health issues, resulting in a lower likelihood of being recommended for diversion. This concern is a subject we are actively engaged in with racial bias experts and behavioral economists.

The Criminal Justice Lab engaged in a two-step validation process to test whether this instrument could work. In 2018, we developed an application for tablet computers that was rolled out to a small group of police officers in Indianapolis, Indiana, to determine whether the short questionnaire could be administered in the field and whether officers would want to use it. These officers reported that individuals understood and responded to the questions, that it took less than five minutes to complete, and that they would be willing to adopt and use it. This was critical feedback because, if officers were not amenable to using the tool, it would not succeed regardless of its accuracy level.

The Criminal Justice Lab then proceeded to test whether the short list of questions could accurately identify individuals with mental illness, substance use disorders, and suicidality. We administered the tool to 712 individuals at booking in jails in Indianapolis, Indiana, and McLean County, Illinois. We then concurrently administered a validated and widely accepted diagnostic tool—the MINI (the Mini International Neuropsychiatric Review)—to the same 712 people. We found that the correlations between the MINI and our tool were strong. We created three different scales—one for

FIGURE 3.6.1 HealthLink Tool AUC-ROC Rates

Mental Illness		Suicidality		Substance Use Disorder	
Score	% Diagnosed	Score	% Diagnosed	Score	% Diagnosed
0	9%	0	2%	0	10%
1	16%	1	7%	1	30%
2	39%	2	18%	2	47%
3	59%	3	38%	3	68%
4	46%	4	61%	4	86%
5	74%	5	65%		
6	84%				

mental illness, one for substance use disorders, and one for suicidality—with scores generated for each scale ranging from 0–4, 0–5, and 0–6, respectively. Each scale uses a different subset of the ten questions on the tool, based on the strength of the correlation between the answer to the question on our tool and the MINI diagnoses. Figure 8.4-1 shows the area under the receiver operating characteristic curve (AUC-ROC) rate for each component of the tool, which range from 0.78 to 0.88. The AUC-ROC is a measure of predictive accuracy, with a range of 0 to 1. Our range of 0.78 to 0.88 is classified as excellent accuracy.⁵ To build support for the tool, we had to show it did a significantly better job than human judgment alone; otherwise, the extra time to administer the tool might not outweigh its benefits to police. It is unique for a tool so short to achieve a similar level of accuracy as an extensive, validated tool used in a medical setting.

As this figure demonstrates, using just ten questions, the HealthLink tool can identify individuals with mental illness, substance use disorders, and suicidality with a high degree of accuracy. The shading shows the cut points established in consultation with our team of experts; based on these, individuals in the shaded zone would be recommended for diversion. When police officers interface with the application of the tool, they will not see the scores for each scale; they will simply see yes or no as an indication of whether the person is eligible for diversion, and based on which of the scales. We wanted to streamline the display for the application so it did not require extra work to understand the tool's results, so as to both encourage use of the tool and reduce human error.

THE PROMISE OF DIVERSION

As noted above, the scoring cut-off points identified 48 percent of all people in the pilot study as eligible for diversion. This means that *almost half of all arrested and screened individuals during the pilot study could be eligible for diversion*. When we consider that 48 percent of the people screened in our validation study would have been eligible for diversion from a behavioral health standpoint, we begin to see the tremendous impact this tool can have on policing and the entire criminal justice system.

To give a sense of scale for this impact, consider that, for Indianapolis, a city of 800,000 that averages about 30,780 arrests and criminal summons annually, an estimated 14,774 people would be eligible for diversion. While the financial savings of diverting up to 14,774 people is calculable, the additional cost savings to communities is immeasurable. As we have seen in recent research findings, averting initial entry into the criminal justice system has the greatest benefits in terms of reducing future criminal justice involvement without increasing local crime rates.⁶

At this time, we are ready to deploy the tool to all law enforcement officers in Indianapolis, Indiana, and McLean County, Illinois. The Criminal Justice Lab would like to scale the tool beyond our first two implementation sites, first to an additional two to four sites and then nationally, with the goal of improving how police departments identify and divert individuals with mental illness, substance use disorders, and suicidality.

To make the adoption and scalability of the use of this tool easy and accessible to all police departments, we are building an application that can be used on Android or Apple systems, that can be run on a phone, tablet, or computer, and that will be free for use. The application also can be used to track outcomes and other metrics, including demographics, numbers eligible for diversion, and those actually diverted, as well as use of the tool. We have secured private funding to build these applications and cover the cost of the first two years of cloud hosting fees to allow for simple and free national scaling.

As our research has revealed, almost *half* of the arrestees in these pilot jurisdictions could be safely diverted from the criminal justice system. The prevalence of underlying behavioral health factors, which remain largely untreated, shows the immense power of a tool like this to change the entire system. When we think about the scale of the problem, we begin to see the extent to which a tool like this can dramatically enhance community safety,

improve long-term outcomes for police-involved individuals, and provide a new path forward for the law enforcement community.

NOTES

1. See Jennifer Bronson, Jessica Stroop, Stephanie Zimmer, and Marcus Berzofsky, “Drug Use, Dependence, and Abuse among State Prisoners and Jail Inmates, 2007–2009,” Department of Justice, Special Report, August 10, 2020, www.bjs.gov/content/pub/pdf/dudaspi0709.pdf.

2. See “Federal Prisons: Information on Inmates with Serious Mental Illness and Strategies to Reduce Recidivism,” GAO, February 2018, www.gao.gov/assets/700/690090.pdf.

3. Samuel R. Bondurant, Jason M. Lindo, and Isaac D. Swenson, “Substance Abuse Treatment Centers and Local Crime,” Working Paper, NBER, September 2016, www.nber.org/papers/w22610.

4. Anne Milgram, Jeffrey Brenner, Dawn Wiest, Virginia Bersch, and Aaron Truchil, “Integrated Health Care and Criminal Justice Data—Viewing the Intersection of Public Safety, Public Health, and Public Policy through a New Lens: Lessons from Camden, New Jersey,” <https://www.ojp.gov/ncjrs/virtual-library/abstracts/integrated-health-care-and-criminal-justice-data-viewing>.

5. S. L. Desmarais and J. P. Singh, “Risk Assessment Instruments Validated and Implemented in Correctional Settings in the United States” (New York City: Council of State Governments, 2013). See, also, M. E. Rice and G. T. Harris, “Comparing Effect Sizes in Follow-Up Studies: ROC Area, Cohen’s d and r ,” *Law and Human Behavior* 29, no. 5 (2005), pp. 615–20, which characterizes AUC values over 0.714 as large.

6. Amanda Y. Agan, Jennifer Doleac, and Anna Harvey, “Misdemeanor Prosecution,” NBER Working Paper No. 28600, March 2021, <https://www.nber.org/papers/w28600>.