October 2024

Issue Brief

Cognitive Behavioral Therapy for Criminal Offending:

Examining the Efficacy and Potential Impact

Carolyn D. Gorman

Paulson Policy Analyst
Manhattan Institute

Robert VerBruggen

Fellow
Manhattan Institute

Introduction

In recent years, federal law has shifted toward a preference for rehabilitation of criminal offenders, rather than incarceration.[1] National polling suggests bipartisan public support for providing incarcerated individuals with mental-health services[2] and, separately, for diverting those with a history of diagnosed mental disorders into treatment rather than the criminal justice system.[3]

Mental-health intervention for crime is not a novel concept. The 20th-century mental-hygiene movement—which has become today's prevailing paradigm—believed from its outset that the role of psychiatrists and "mental-health" professionals was not just to provide treatment to individuals with mental disorders but to alleviate all forms of social ills, including criminal offending.[4] This was to be done in many ways, from preemptive, preventive mental-health treatment to political advocacy. The movement has led to increased medicalization of social problems[5] and ever-growing diagnostic inflation,[6] which have increased the proportion of the overall population who have a mental-health label or receive mental-health treatment.[7] The same is true for the incarcerated population: over 40% of all state and federal prisoners have at one point received a mental-health diagnosis.[8] Criminal behavior is sometimes diagnosed as mental disorder itself,[9] and violence and public disorder are increasingly rationalized by assumed mental-health challenges.[10]

In correctional and community settings alike, there have been numerous attempts to address criminal offending through mental health–oriented approaches. Jails and prisons are required by law to provide mental-health care to those incarcerated with serious mental illnesses.[11] Diversion

programs like mental-health courts and drug courts are meant to divert offenders away from incarceration in return for participation in monitored outpatient mental-health treatment.[12] Public funding for preventive mental-health programming for youth, including those considered at risk of violence,[13] has been provided to schools and through public-health awareness campaigns and initiatives.[14]

Recently, attention has been given to Cognitive Behavioral Therapy (CBT) as a potential crime-control solution, particularly for violent offenders.[15] In essence, CBT can be used to treat various mental disorders, perhaps including criminal impulsiveness, by training patients to recognize and correct problematic thinking patterns. This issue brief reviews the empirical evidence for CBT as a viable intervention for crime reduction and assesses the extent to which it might realistically have an impact.

We find that CBT can have modest impacts in the context of criminal offending but is not a panacea. Considerable uncertainty surrounds many key questions, including the best way to implement CBT at scale and the populations for which it is most effective. Policymakers' priorities should include further study of existing CBT efforts, as well as careful expansion of those found to be effective—with effectiveness measured by meaningful outcomes such as reduced recidivism, reduced prevalence of violent or serious criminal offending, reduced onset or prevalence of mental illness, and reduced disability from symptoms of mental illness.

What Is CBT?

CBT is a form (and perhaps more accurately today, a family type) of psychotherapy that attempts to reduce distress (e.g., depression, anger) and problematic behaviors by helping individuals "identify, challenge, and change maladaptive thought patterns in order to change their responses to difficult situations."[16] CBT assumes a relationship between thoughts, emotions, and behaviors.[17] It provides strategies that can be used to recognize reactive, distorted, automatic thoughts and then reconsider their merit. Distorted thinking can be a notable characteristic among criminal offenders,[18] in whom it might take the form of blaming ("Society is out to get me"), overgeneralizing ("I can never catch a break"), or mind-reading ("He thinks I'm weak and said that to provoke me"), to take just a few examples.[19]

Commonly, individuals first work collaboratively with a licensed mental-health professional to learn the process and techniques of CBT.[20] Mental-health professionals can vary widely in their level of training; psychiatrists, for example, hold medical degrees, while psychologists or licensed clinical social workers may have master's-level education. Providing CBT does not require a license.[21] Packaged CBT curricula can be purchased by anyone and thus, in theory, be administered by anyone, or even self-administered.

In general, the process of CBT involves a sequence of steps: first, one identifies feelings of distress or problematic behaviors and judges their severity; next, the associated event and automatic thoughts are noted; then, determining if and how the automatic thoughts might be distorted, one reinterprets the event more evenhandedly; finally, the new emotional response is noted, and, in theory, the associated distress is likely judged as less severe and the corresponding behavioral response more measured and appropriate.[22]

Unlike many other forms of psychotherapy, CBT is not concerned with distress as a residual effect of earlier life experiences (e.g., childhood adversity); instead, it is action-oriented in that it is proactively focused on improving current emotional and behavioral responses.[23] Techniques

for doing so might include thinking skills like self-monitoring, information gathering, critical reasoning, and goal setting. Role-play scenarios and practicing these techniques in real situations are often used to teach skills.[24]

CBT is the most researched form of psychotherapy and considered by some to be the best standard of psychological treatment currently available.[25] CBT was developed in the 1960s by Aaron T. Beck, a psychiatrist whose work initially focused on depression.[26] Beck theorized that depressive symptoms resulted from patients' negative underlying beliefs, often about themselves; he found that when patients reevaluated their thinking, they felt better and modified their behavior.[27]

CBT has since been used as an intervention for many types of mental-disorder diagnoses, as well as for situation-specific challenges and antisocial behaviors, including, but not limited to, generalized anxiety disorder, obsessive-compulsive disorder, eating disorders,[28] anger,[29] insomnia,[30] chronic pain,[31] alcohol and drug use,[32] and sexual offending.[33] CBT can be provided individually, on a group basis, or both. Corrections-based programs are frequently provided in groups.[34]

While CBT generally follows the process and key principles described above, many different forms of CBT now exist and are practiced.[35] As a result, there is now less clarity on definitions and principles of CBT,[36] and versions of the practice are increasingly heterogenous.[37] This proliferation warrants attention because, as researchers have recognized, not all interventions labeled as CBT maintain fidelity to empirically supported constructs.[38]

How Available Is CBT to Offenders?

CBT is offered in a wide variety of criminal justice settings, but data are generally scarce as to what proportion of the target population has access to or participates in this form of treatment. This makes it impossible to precisely calculate how much room there is for policymakers to expand the use of CBT; future research should be devoted to a thorough census of existing rehabilitation programs, the share of offenders who can and do access them, and the approaches that they take. However, it is worthwhile to briefly review what information is available on the status quo.

Prisons and their respective parole systems tend to offer a variety of rehabilitation and reentry programs, and many inmates report receiving such help in surveys. Sometimes CBT and other mental-health treatment is required or incentivized in various ways, including with cash, good-behavior credits, sentence reductions, and priority for placement in halfway houses.[39]

The Survey of Prison Inmates[40] asks state and federal inmates many questions about the help and programming that they have received. In the 2016 (most recent) round of the survey, 35% of inmates reported that they had taken anger-management courses since admission, 24% reported receiving mental-health treatment, and 21% reported receiving substance-abuse treatment (with 7% receiving counseling specifically for this purpose, as opposed to education or other treatments). Unfortunately, the survey does not collect data about CBT specifically.

In a survey of state corrections departments conducted in 2015 and 2016,[41] all the responding agencies reported providing some sort of reentry services to the incarcerated, with 68% providing mental-health help and more than half offering substance-abuse treatment for this purpose. Although the survey did not ask about CBT as such, it did ask about specific curricula, some of which are either based on, or often include, CBT—e.g., 5% of respondents said that they use Thinking for a Change, and more than 20% said that they use the Risk, Needs, Responsivity approach. More

recently, states have also begun offering trauma services, especially to female inmates; 73% reported doing so in the survey, with about 9% specifically saying that they provide CBT in the trauma context. Of course, a major limitation of collecting these numbers state by state is that the survey does not tell us how many *facilities* offer these programs or what percentage of *inmates* have access to them or choose to participate.[42]

Prisons are not the only setting in which CBT is used in relation to criminal offending. As the number of beds in state-run psychiatric hospitals has declined over the past half-century, these facilities are increasingly populated by forensic patients—i.e., those who are there as a result of the criminal legal system, commonly to establish an individual's competency for trial.[43] In 2023, 52% of beds in state psychiatric hospitals were occupied by forensic patients, nationally.[44]

The National Substance Use and Mental Health Services Survey (N-SUMHSS) reports various treatment modalities offered by state psychiatric hospitals, among other treatment facility types; in 2022 (the latest survey available), 29 of 33 state hospitals (87.9%) reported offering CBT,[45] and 27 of 33 state hospitals (81.8%) offered treatment programs or groups dedicated to, or exclusively designed for, forensic patients.[46] To be clear, this is a small portion of the overall incarcerated population. In 2021, the U.S. jail population alone was about 634,400,[47] and nationally, about 36,150 state-run psychiatric hospital beds were available in 2023, putting the estimated hospitalized share of jailed individuals at about 4%. Still, 5,576 inmates were awaiting admission to a state hospital in 2023, and inmates spent a median of two months in jail waiting for a bed to open across 26 states.[48]

More anecdotally, we can look at the two largest states in the country, which fortuitously fall on opposite sides of the red/blue divide. Texas's Department of Criminal Justice offers, among other reentry programs, the Corrective Intervention Pre-Release Program, a 120-day curriculum that "is designed for the inmates to begin to build awareness about the thinking and attitudes that have impacted their choices" and "includes a workbook-based cognitive change program designed for in-cell use along with computer technology that allows for classroom style interaction with the staff."[49] California's Department of Corrections and Rehabilitation reports[50] that inmates with at least six months to release are eligible for a 14-week substance-abuse-focused CBT program, and those with a year left are eligible for a seven-month program "focused on addressing: treatment readiness, anger management, victim impact, criminal thinking, and family planning /parenting." Both programs take two hours per day, three days a week.

Federal facilities hold less than 15% of all prisoners, but they also offer considerable CBT programming. According to the most recent (2023) First Step Act Approved Programs Guide, all federal prisons offer CBT-based options, including Basic Cognitive Skills, Criminal Thinking, and Emotional Self-Regulation. More focused CBT programming handles issues such as substance abuse, trauma, serious mental illness, depression, chronic pain, and eating disorders, though not all options are available at all facilities. Under the First Step Act, some federal inmates can earn time credits for participating in recidivism-reduction programs such as these.

There are also, of course, programs targeted to at-risk members of the broader community, including low-income youth and adults with criminal histories; estimates of these programs' full availability are even more elusive.

The justice system is certainly well aware of CBT, and much of its rehabilitation programming claims to deploy CBT techniques.[51] However, there is space to expand the availability of CBT, provide versions adhering to key principles over those that do not, implement programming in a more intensive or efficacious manner, and incentivize (or require) participation more heavily.

CBT Can Work—but Doesn't Always

CBT has been studied extensively over several decades, and numerous literature reviews have estimated its effectiveness in preventing recidivism.

How does one tell whether a program works? Ideally, researchers randomly assign some individuals to receive treatment and others not to; this way, it is fairly certain that the *only* systematic difference between the two groups is the treatment itself. Alternatively, we can sometimes find "natural experiments," in which some individuals, but not others, receive treatment in quasi-random fashion—such as when some counselors are more likely than other counselors to direct patients to CBT, as in a notable recent Canadian study.[52] Barring that, researchers may create a control group by "matching" program participants to nonparticipants who are similar in various ways (such as age, race, sex, and criminal history)—or they can statistically account for important participant characteristics such as these—but these techniques cannot account for the possibility that those who participate are simply more motivated to change than those who do not participate.

In 2007, Mark W. Lipsey, Nana A. Landenberger, and Sandra J. Wilson published a *Campbell Systematic Review* based on 58 studies that used any of these methods to study CBT's effect on recidivism in general offender populations. They included studies of well-known CBT programs—or highly similar variants[53]—that deployed principal techniques like identifying and changing distorted thinking, teaching thinking skills, and self-monitoring. They excluded programs designed for specific populations (substance abusers, sex offenders, etc.) and removed studies whose control groups included individuals who were offered CBT but actively refused it or who quit treatment partway through. They combined all the studies' results, focusing on measures of rearrest after 12 months, where available, but also including reconviction or incarceration or other time periods when necessary.

They found that, on average, CBT reduced recidivism by about a quarter, from 40% in the typical control group to 30% among those treated. Importantly, whether the studies used random assignment or other methods made little difference to this result, nor did the setting of program administration (e.g., during incarceration or in the community), suggesting that the findings of an effect may be robust. Programs that were closely monitored to ensure quality and fidelity of implementation were most likely to be effective, regardless of the provider's mental-health background.

After more than a decade and a half, this finding is among the most commonly cited for the effectiveness of CBT, and it is loosely consistent with other reviews,[54] including reviews focused on specialized populations.[55] The magnitude of this effect highlights that CBT interventions can be worthwhile and effective but that they are far from a panacea. Indeed, the caveats in this and other reviews—and additional concerns raised in other sources—are as important as the bottom-line conclusion that CBT can be effective in preventing some amount of crime.

The Lipsey et al. review extensively compared the finer details of various programs with the estimates of their effectiveness. The most effective programs focused on higher-risk offenders, combined CBT with other components, were more time-intensive, were better-implemented (as measured, for example, by the proportion of dropouts and whether it was a research program, which tends to be run by motivated staff), included individual attention beyond group sessions, and focused on cognitive restructuring and anger control. A focus on victim impact and the use of reward/penalty schemes to modify behavior were associated with *worse* outcomes.

The heterogeneity in outcomes for different programs indicates that many types of CBT are not particularly effective but also that the right kind of CBT could be more effective than the central estimate of the study. By Lipsey et al.'s modeling, a CBT program would reduce recidivism by about half, even without being combined with other services, if it were characterized by high-quality implementation with zero attrition, moderately high-risk offenders, two sessions a week for 16 weeks, and anger control and interpersonal problem-solving components.

But there are reasons to believe that Lipsey et al.'s main estimate was too high. Only six of the 58 studies included were highly rigorous, meaning that they were randomly assigned, conducted in the "real world" (outside research or demonstrations settings), and maintained enough participants throughout the individual study to produce results with strong internal validity. The authors noted: "The amount of high-quality research on CBT in representative correctional practice is not yet large enough to determine whether the impressive effects on recidivism found in this meta-analysis can be routinely attained under everyday circumstances."

A 2019 federal review,[56] carried out on behalf of the First Step Act Independent Review Committee, raised several other concerns. It pointed out that much of the available research is decades old, that studies typically focus on shorter-term impacts (e.g., within one year), and that the federal system's programs had not been recently and systematically evaluated. More particular concerns were articulated in a 2018 article from the health-services criminologist Faye Taxman, who stressed that, while we may know that CBT works, we lack knowledge of the "nitty gritty," including what type of staff should administer it, whether the use of (and fidelity to) a brand-name curriculum is helpful, how high of a treatment dosage is needed to move outcomes, and how CBT should be sequenced with other treatments.[57]

Perhaps most concerning is a 2021 meta-analysis in *Lancet Psychiatry*.[58] The review was limited to studies that used randomized controlled trials (RCTs)—the gold-standard research method for evaluation—to analyze programs delivered during incarceration (not in the community). Only six CBT studies met these stricter criteria, but these programs appeared to have no effect on recidivism: not only was the estimated effect statistically insignificant, but it was almost exactly zero.[59] In explaining this result, the authors speculated that "these interventions are not linked with psychosocial support upon release" or "do not address the accommodation, employment, and financial difficulties after release that contribute to recidivism risk." They also highlighted that previous reviews have combined RCTs with less rigorous studies and that "only one of the six CBT studies in our systematic review reported significant reductions in reoffending," and questioned the "widespread roll-out of these treatment approaches in prisons" in light of the findings.

At minimum, the positive effects of CBT appear to be tempered by the quality and fidelity of a program being provided—which is important because clinical guidelines and best practices are frequently unmet or unimplemented in mental-health care and treatment.[60] Historically, state correctional agencies have frequently not had a single specific person who is responsible for overseeing correctional treatment programs or is knowledgeable about all the programs and services provided.[61] A lack of dedicated responsibility (and potentially, accountability) for the overall suite of programs that a given setting may deploy could suggest a more general lack of intensive oversight or attention to programs' fidelity.

CBT in Chicago: Recent Experiments

Recent work from the University of Chicago Crime Lab deserves special attention for its rigorous approach to program evaluation. For over a decade, the lab has partnered with various organizations to study CBT interventions, using randomized trials coupled with careful statistical methods to account for the fact that individuals randomized to participate in these programs sometimes do not participate.

Both the promise of CBT-based efforts to reduce crime and the significant variation in results can be seen in the lab's evaluations of four very different programs, which ranged from highly affordable to extremely expensive and targeted subjects ranging from low-income middle-school boys to hardened twentysomething criminals at high risk of serious violence.

Choose to Change

"Choose to Change" is a six-month program that recruits youth with an average age of 16 at a high risk of violence—referred by nonprofits, public agencies, and schools—and provides them with at least eight hours per week of mentoring, plus trauma-informed CBT sessions, at a cost of $5,000–$7,600 per participant. A recent working paper provides a thorough summary of the program's RCT.[62]

At various points after the program began, from six to 36 months, the researchers consistently found reductions in rates of arrest generally, and specifically in rates of arrest for violent crime—albeit with less-to-no effects on arrest for property, drug, and other crimes. After 36 months, those who had been offered the program saw a reduction in the probability of any arrest of about 5 percentage points (compared with a control group where nearly 40% were arrested) and a 3-point reduction for any violent arrest (vs. nearly 20% of the control group). Since not everyone offered the program took it up, the effects of actually participating were higher (decreases of 8 and 5 percentage points, respectively).

However, the results were weaker for the total *number* of arrests (violent or otherwise), as opposed to the binary question of whether *any* arrest had occurred. Even at shorter follow-up points, the effects on this measure were often statistically insignificant, especially after adjustment for multiple hypothesis testing. (In randomly generated data, 10% of comparisons will be considered significant at the 10% level, on average; multiple-hypothesis adjustments account for this dynamic in situations where researchers are studying numerous comparisons at once.) And at 36 months, all the *un*adjusted results, for every type of crime analyzed, were statistically insignificant. These numbers still suggested some reduction in total and violent arrests, even if the differences were not statistically significant.

Choose to Change clearly succeeded in getting some participants to stay out of some trouble, at least in the short run, with less clear effects on the total amount of trouble prevented.

CBT in Juvenile Detention

After a lawsuit resulted in its takeover by a court-appointed administrator, Cook County's Juvenile Temporary Detention Center—which holds high-risk minor arrestees for an average of three to four weeks before courts handle their cases—implemented CBT sessions for males twice daily, during times that inmates had previously spent watching TV. Participants also filled out "thinking

reports" following behavioral incidents, documenting the thought processes that caused them to act out. Fortuitously for scientific purposes, inmates were assigned to residential units in essentially random fashion, the reforms rolled out in different units at different times, and further legal wrangling temporarily halted expansion of the program after it had been implemented for only half the units.

By a 2017 study's[63] estimates, the program produced substantial declines in readmission to juvenile detention, by about 16 percentage points after 18 months, a decline of about one-fifth. It also reduced the total number of readmissions by about one for every 1.4 participants. However, when the outcome was defined as the number of times being readmitted *or* rearrested, the decline was no longer significant and, in fact, was slightly smaller in absolute terms.

Like Choose to Change, this program clearly had measurable positive impacts despite some caveats—and it cost only about $60 per participant.

Becoming a Man

The "Becoming a Man" program works with male middle- and high-school students in low-income areas for an hour a week, teaching them to slow down their thinking in potentially violent situations, at a cost of about $1,850 per participant per year. A 2018 study[64] broke down the program's effects by combining the results of four randomized trials in various ways (such as looking at results after the first year, at program completion, etc.). Each treatment and control group in every trial included more than 1,000 participants.

The results for arrests[65] were, unfortunately, lackluster. The most promising finding was a possible reduction in violent-crime arrests, with one comparison suggesting a drop of more than a third for those who participated—though other ways of aggregating the trials suggested smaller, statistically insignificant, declines. Further complicating matters, none of the arrest results remained statistically significant at the 5% level with correction for multiple hypothesis testing. The program appeared to have little to no impact on drug or property arrests, as all those results were insignificant and tiny.

The pessimist's take is that the program might have achieved nothing on the crime front: with adjustment for multiple hypothesis testing, all the arrest results are null. A more optimistic read is that Becoming a Man is a promising program worthy of further investment and study but one whose overall effects on crime could be modest, and thus may require large sample sizes to measure accurately.

READI Chicago

Easily the most intensive intervention discussed here, READI Chicago provides five-day-a-week programming, including 90-minute CBT sessions on three mornings and professional-development sessions on two, followed by subsidized employment. Results from an RCT evaluating the program were published this year.[66]

The study recruited participants, 25 years old on average, through three pathways: 1) antiviolence street outreach workers, who were told to select those at the highest risk of violence (but who noted in interviews that they also selected people who were ready to make a change); 2) an algorithm that mathematically chose Chicagoans at highest risk based on administrative data; and 3) risk screening of those leaving prison or jail. Participants were paid $25 for each session that they attended and were eligible for the subsidized work (starting at $11/hour) only if they accepted CBT. The program cost about $52,000 per participant.

READI certainly selected individuals at high risk: incredibly, over 10% of the study's control group were shot or killed within 20 months. The program was also effective in getting members of the randomly selected treatment group to participate, with an initial take-up rate of 55%, though participation fell by nearly half within a year.

Did the investment pay off? It depends on how one reads the statistical results and on how one evaluates the methodology used to arrive at them.

The authors admirably "pre-registered" their plans for analyzing the numbers, a hallmark of good science that prevents researchers from, subconsciously or not, fishing around in data to highlight desirable results. They originally planned to look at two outcomes: serious violent-crime arrests; and shooting/homicide victimizations (meaning cases where the subject himself was shot or killed). However, their recruitment methods ultimately proved more accurate than expected, giving them a larger than anticipated sample of arrests specifically for shootings and homicides. They opted to split the arrest category in two: one category for shootings and homicides; and the second for other serious violence, thus creating three outcomes.

Shooting or homicide arrests were the rarest of the three outcomes, with only about 50 across both treatment and control groups.[67] Subjects were the victims of shootings and homicides about four times as often as they were arrested for shooting or killing others, which may reflect, in part, low clearance rates for these crimes, particularly in Chicago's black neighborhoods.[68] Even arrests for other serious violence were only half as common as shooting or homicide victimization.[69]

This background is important because the only overall metric that showed statistically significant benefits was this small, newly created category of shooting-and-homicide arrests. An index combining all arrests and shooting/homicide victimization, which the authors considered their primary outcome of interest, was slightly lower in the treatment group, a statistically insignificant difference. The shooting victimization measure also showed a modest, statistically insignificant, decline. Arrests for serious violence besides shootings and homicides showed a small, insignificant *increase*.

But arrests for shootings and homicides were dramatically lower in the treatment group, such that those who actually participated in the program were 65% less likely to experience these arrests. The difference was statistically significant on its own, though no longer significant after adjustment for multiple-hypothesis testing.

Further, when the researchers broke the results down by the participants' referral pathway, they discovered that the results were strongest for those sent by outreach workers (who, beyond the decline in shooting/homicide arrests seen in the full sample, also saw improvements in the overall index and shooting/homicide victimizations). Within that subset, those with high risk scores also saw stronger benefits, suggesting a combination of the two recruitment methods might be promising, bearing in mind that these results are based on a relatively small sample.

Needless to say, if programs like READI can select people at an extremely high risk of gun violence and reduce their firearm offending by two-thirds, they're a good investment. But it's possible that this effect was a statistical fluke; and the program is very expensive to run.

Recommendations

An Appropriate Approach to CBT for Criminal Offending

In light of the foregoing, we believe the following to be an appropriate approach to CBT: keep doing it, but adhere to known best practices and study the results so that best practices can be better understood, shared, replicated, and improved.

First, given the overall positive thrust of the existing research, policymakers should continue to pursue CBT efforts. In return for this investment, they should expect modest reductions in criminal offending in the short term. Longer-term effects are much less clear, and CBT is certainly not a panacea over any time frame. A suite of solutions that includes services other than mental-health treatment should be considered for those at risk of criminal and violent offending, particularly services like employment and housing, known to contribute to recidivism risk.

Second, policymakers should ensure that programs adhere to best practices and maintain core components of CBT that have demonstrated effectiveness, which has been a noted challenge.[70] For example, the potential of CBT seems greatest when concerned with current behavior change rather than past experiences, when the therapy is targeted, used intensively (frequently over a longer period) with subjects at high risk of recidivism, and in complement with other services and supports. Offenders with mental illness have a high risk of recidivism and general risk factors for recidivism.[71] Providing continuity of care between correctional, inpatient, and outpatient settings has long-standing research support but has not been implemented, by and large.[72] Mental-health treatment, particularly in jails, often falls short; it may consist of medication alone, for example, and even on this front, a majority of jail inmates who may warrant medication do not always receive it.[73] Providing high-quality CBT in addition to medication would help make the criminal justice system a location where mentally ill individuals can connect with public systems and access treatment.

Third—and most important—given the many ways in which CBT programs differ and the wide range of estimates of their effectiveness, state agencies and nonprofits that run CBT programs should work with researchers to study their efforts with randomized trials, as has been done in Chicago. Federal and state lawmakers should consider funding such research in a systematic fashion prior to vast expansions. This would allow program operators to reform or replace initiatives that are not working and to document more thoroughly, for the benefit of all, which approaches do work. Important questions about quality deserve further attention before expansion: What types of providers or treatment structures promote the highest-quality treatment and best outcomes? How, and to what extent, does individual or group therapy affect treatment effect, and for which groups of offenders? Might CBT via telehealth be a viable solution in locations where mental-health providers are scarce?

While it is unclear what types of providers are required for CBT to have greatest efficacy, it is worth noting that there is a documented shortage of mental-health professionals practicing in correctional settings and serving seriously mentally ill patients.[74] Outside the carceral system, many psychiatrists do not accept Medicaid—an important health-insurance provider to both low-income and mentally ill individuals—due to low reimbursement rates. Attracting more providers for the incarcerated and the seriously mentally ill will require thoughtful solutions—perhaps encouraging or requiring internships and residencies in correctional or inpatient settings, where practitioners will gain exposure to working with these populations. To the extent that CBT can successfully be provided via telehealth, this may also serve as a partial solution.

An Appropriate Approach to Mental Illness and Crime

The current availability of intensive, high-quality mental-health treatment and services for those with serious mental illnesses leaves much to be desired, both in and out of correctional settings. Some criminal justice reformers argue that the mentally ill need not be incarcerated and could instead be treated on an outpatient basis—but the community mental-health system has generally demonstrated neither the capacity nor the interest in serving those at highest risk of criminal offending or violence from mental illness. As long as community care is inadequate, correctional institutions will continue to host a disproportionate share of the seriously mentally ill, and rehabilitation efforts will therefore need to be weighed alongside the need to maintain public safety.

CBT might assist with some high-risk mentally ill offenders (and can also be effective for those without serious mental illness), but it is far from appropriate as a sole mental-health intervention in correctional settings. Adequate treatment for the most seriously mentally ill will require other efforts, as well. CBT requires that patients already have a level of self-awareness to understand that there may be a problem with their underlying thought processes; some mentally ill offenders who must have competency restored before trial, for example, would need other intensive treatment and stabilization efforts to understand the nature of their incarceration. For mentally ill offenders leaving correctional settings, greater efforts by the public mental-health system, specifically, to maintain connectivity with services are especially needed to prevent recidivism, and long-acting injectables may also play a valuable role to this end.[75]

States and counties should work to maintain adequate inpatient psychiatric bed capacity both for forensic and non-forensic patients; the federal government could support these efforts by repealing an outdated provision in Medicaid law called the Institutions for Mental Diseases (IMD) Exclusion, which creates a strong financial disincentive for doing so.[76]

Regardless of clinical status, community mental-health treatment, including CBT, should not necessarily be a substitution for jail or prison for any given person who commits a violent offense. It is important to maintain the integrity of public institutions by enforcing laws and expectations for following them. All individuals, including those with serious mental illnesses, respond to incentives. A laudable aspect of CBT is its promotion of personal responsibility and accountability, in contrast to some other forms of psychotherapy. Arbitrary enforcement, or nonenforcement, of laws is in conflict with CBT's own therapeutic principles, and thus substituting it for incarceration sends a conflicting message. This is not to say that CBT and other diversion programs, like mental-health courts or assisted outpatient treatment, are not a worthy pursuit. But those programs should maintain a high bar of accountability and a high level of service intensity for participants, and they may not be appropriate for all offenders.

Conclusion

As therapeutic approaches go, CBT can be a useful tool for problematic behavior like criminal offending, at least in the short term, and it can be effective as a component of treatment for those with mental illness in the criminal justice system. However, the limitations of CBT should not be underappreciated. The extent to which any given program or provider maintains fidelity to the key principles of CBT will aid or temper its impacts, and those with the most serious mental illnesses will certainly need additional services and support. The fact that community mental-health and outpatient treatments have been applied over decades and crime has not dissolved, even among the mentally ill, speaks to these limitations. Any use of CBT to address criminal offending should be part of a broader suite of solutions.

Acknowledgments

The authors would like to thank Matias Ahrensdorf and Emily Murphy for their research assistance.

Endnotes

1 Ashley Nellis and Liz Komar, "The First Step Act: Ending Mass Incarceration in Federal Prisons," The Sentencing Project, Aug. 22, 2023; The White House, "Fact Sheet: Biden-Harris Administration Takes Action During Second Chance Month to Strengthen Public Safety, Improve Rehabilitation in Jails and Prisons, and Support Successful Reentry," Apr. 28, 2023.

2 American Psychiatric Association, "New National Poll Cites Wide Support for Mental Health Programs in Jails and Prisons," press release, Oct. 17, 2022.

3 See, e.g., American Civil Liberties Union and Benenson Strategy Group, "Smart Justice Campaign Polling on Americans' Attitudes on Criminal Justice," Nov. 16, 2017, which found that 84% of Americans report believing that people with mental-health disabilities belong in mental-health programs instead of prison.

4 See Gerald N. Grob and Howard Goldman, *The Dilemma of Federal Mental Health Policy: Radical Reform or Incremental Change?* (New Brunswick, NJ: Rutgers University Press, 2006: "The creation of CMHCs [community mental-health centers] also occurred at a time in which social and political conflicts were accompanied by demands for civil rights and greater equality as well as criticisms of the growing American involvement in Vietnam. The antiorganizational ideologies that emphasized the importance of community activism by hitherto marginal groups led some CMHCs to devote their energies to improvement of social conditions. 'The success of a mental-health program,' two NIMH officials remarked in an address at the American Psychopathological Association in early 1967, 'is no longer simply a function of the clinical skills of the program staff; the success of a program is equally dependent on skills in coping with, and adapting to, and sometimes even changing the local political, social, and economic environment.' The focus of some CMHCs on social action only served to deflect their energies still further away from the needs of persons with serious disorders" (44). "Another visible symbol of change was the creation of a mental hygiene movement after 1900. . . . As members of a profession they believed was destined to play an increasingly central role in the creation of a new social order, psychiatrists [of the mental hygienist persuasion] began to redefine their role . . . to lead the way in research and policy formation and develop mechanisms to promote mental hygiene goals. Their responsibilities . . . included the care of the feebleminded, the control of alcoholism, the management of abnormal children, the treatment of criminals, the fostering of eugenics, and the prevention of crime, prostitution, and dependency" (10).

5 Ashley Frawley, "Medicalization of Social Problems," in *Handbook of the Philosophy of Medicine*, ed. Thomas Schramme and Steven Edwards (Dordrecht, Netherlands: Springer, 2017); Michael Montagne, review of *The Medicalization of Everyday Life: Selected Essays*, by Thomas Szasz, *American Journal of Pharmaceutical Education* 72, no. 5 (Oct. 15, 2008): 123; Peter Conrad and Caitlin Slodden, "The Medicalization of Mental Disorder," in *Handbook of the Sociology of Mental Health*, ed. Carol S. Aneshensel, Jo C. Phelan, and Alex Bierman (Dordrecht, Netherlands: Springer, 2017).

6 Paul Kudlow, "The Perils of Diagnostic Inflation," *Canadian Medical Association Journal* 185, no. 1 (Jan. 8, 2013): E25–26.

7 Jean M. Twenge et al., "Age, Period, and Cohort Trends in Mood Disorder Indicators and Suicide-Related Outcomes in a Nationally Representative Dataset, 2005–2017," *Journal of Abnormal Psychology* 128, no. 3 (April 2019): 185–99; Anthony F. Jorm et al., "Has Increased

Provision of Treatment Reduced the Prevalence of Common Mental Disorders? Review of the Evidence from Four Countries," *World Psychiatry* 16, no. 1 (February 2017): 90–99; Ronald C. Kessler et al., "Prevalence and Treatment of Mental Disorders, 1990 to 2003," *New England Journal of Medicine* 352, no. 24 (June 2005): 2515–23. Perhaps most concerningly, based on diagnostic interview data from National Comorbidity Survey Adolescent Supplement as reported by NIMH, an estimated 49.5% of adolescents had any mental disorder; see NIMH, Mental Illness.

8 Self-reported measure from the Survey of Prison Inmates (SPI), 2016. Metrics are from most recently available data: https://bjs.ojp.gov/sites/g/files/xyckuh236/files/media/document/imhprpspi16st.pdf.

9 Yusuf Matcheswalla and Avinash De Sousa, "Crime and Psychiatry," *Mens Sana Monograph* 1, no. 1 (2015): 143–49.

10 Carolyn D. Gorman, "Focus on Treatment, Not 'Stigma', " *City Journal*, Jan. 31, 2024.

11 Stephen Eide, "How to Reform Correctional Mental Health Care," Manhattan Institute, March 2024.

12 Laura N. Honegger, "Does the Evidence Support the Case for Mental Health Courts? A Review of the Literature," *Law and Human Behavior* 39, no. 5 (October 2015): 478–88; Erin Comartin et al., "Short- and Long-Term Outcomes of Mental Health Court Participants by Psychiatric Diagnosis," *Psychiatric Services* 66, no. 9 (September 2015): 923–29.

13 "Prevention and Intervention," U.S. Dept. of Health and Human Services (HHS), *Youth Violence: A Report of the Surgeon General* (2001).

14 Carolyn D. Gorman, "Mental Health First Aid: Assessing the Evidence for a Public Health Approach to Mental Illness," Manhattan Institute, June 2022.

15 Sigal Samuel, "A Study Gave Cash and Therapy to Men at Risk of Criminal Behavior. 10 Years Later, the Results Are In," *Vox*, May 31, 2022; Christy Visher and John Eason, "A Better Path Forward for Criminal Justice: Changing Prisons to Help People Change," Brookings Institution, April 2021.

16 *Psychology Today*, "Cognitive Behavioral Therapy."

17 Deborah A. Roth, Winnie Eng, and Richard G. Heimberg, "Cognitive Behavior Therapy," in *Encyclopedia of Psychotherapy*, ed. Michel Hersen and William H. Sledge (San Diego: Academic Press, 2002), 1:451–58.

18 Mark W. Lipsey, Nana A. Landenberger, and Sandra J. Wilson, "Effects of Cognitive-Behavioral Programs for Criminal Offenders," *Campbell Systematic Reviews* 3, no. 1 (August 2007): 1–27.

19 Robert L. Leahy, Stephen J. F. Holland, and Lata K. McGinn, *Treatment Plans and Interventions for Depression and Anxiety Disorders*, 2d ed. (New York: Guilford, 2012).

20 Mayo Clinic, "Cognitive Behavioral Therapy"; Cleveland Clinic, "Cognitive Behavioral Therapy."

21 Kristina Fenn and Majella Byrne, "The Key Principles of Cognitive Behavioural Therapy," *InnovAiT* 6, no. 9 (September 2013): 579–85.

22 Greg Lukianoff and Jonathan Haidt, *The Coddling of the American Mind: How Good Intentions and Bad Ideas Are Setting Up a Generation for Failure* (New York: Penguin, 2018), appendix 1: "How to Do CBT."

23 American Psychological Association, "What Is Cognitive Behavioral Therapy?"

24 Lipsey, Landenberger, and Wilson, "Effects of Cognitive-Behavioral Programs for Criminal Offenders."

25 Daniel David, Ioana Cristea, and Stefan G. Hofmann, "Why Cognitive Behavioral Therapy Is the Current Gold Standard of Psychotherapy," *Front Psychiatry* 9, no. 4 (Jan. 29, 2018).

26 Judith S. Beck and Sarah Fleming, "A Brief History of Aaron T. Beck, MD, and Cognitive Behavior Therapy," *Clinical Psychology in Europe* 3, no. 2 (June 2021): e6701.

27 Beck Institute, "Dr. Aaron T. Beck, Development of Cognitive Behavior Therapy."

28 Joshua E. Curtiss, "Cognitive-Behavioral Treatments for Anxiety and Stress-Related Disorders," *Focus* 19, no. 2 (Spring 2021): 184–89.

29 Richard Beck and Ephrem Fernandez, "Cognitive-Behavioral Therapy in the Treatment of Anger: A Meta-Analysis," *Cognitive Therapy and Research* 22, no. 1 (February 1998): 63–74.

30 Jeffrey Rossman, "Cognitive-Behavioral Therapy for Insomnia: An Effective and Underutilized Treatment for Insomnia," *American Journal of Lifestyle Medicin*e 13, no. 6 (November–December 2019): 544–47.

31 Jae-A Lim, "Cognitive-Behavioral Therapy for Patients with Chronic Pain: Implications of Gender Differences in Empathy," *Medicine 97*, no. 23 (June 2018): e10867.

32 Kathleen M. Carroll and Brian D. Kiluk, "Cognitive Behavioral Interventions for Alcohol and Drug Use Disorders: Through the Stage Model and Back Again," *Psychology of Addictive Behaviors* 31, no. 8 (December 2018): 847–61.

33 Jennifer L. Harrison, "Sexual Offender Treatment Effectiveness Within Cognitive-Behavioral Programs: A Meta-Analytic Investigation of General, Sexual, and Violent Recidivism," *Psychiatry, Psychology and Law* 27, no. 1 (January 2020): 1–25.

34 E.g., Strategies for Self-Improvement and Change (SSC) is provided on a group basis, as is Aggression Replacement Training (ART) and Moral Reconation Therapy.

35 Fenn and Byrne, "The Key Principles of Cognitive Behavioural Therapy."

36 Warren Mansell, "The Seven C's of CBT: A Consideration of the Future Challenges for Cognitive Behaviour," *Behavioural and Cognitive Psychotherapy* 36, no. 6 (2008): 641–49.

37 Simon E. Blackwell and Thomas Heidenreich, "Cognitive Behavior Therapy at the Crossroads," *International Journal of Cognitive Therapy* 14 (2021): 1–22.

38 Roz L. Shafran et al., "Mind the Gap: Improving the Dissemination of CBT," *Behaviour Research and Therapy* 47, no. 11 (November 2009): 902–9.

39 Boston Consulting Group, "Reducing Recidivism Through Programming in the Federal Prison Population Final Report: BOP Programs Assessment," Sept. 19, 2016.

40 Bureau of Justice Statistics, Survey of Prison Inmates, accessed via ICPSR, University of Michigan.

41 Tanya Renn, Carrie Pettus-Davis, and Christopher Veeh, "A Point-in-Time Survey of State Department of Corrections Prison-Based Programming," Institute for Justice Research and Development, Florida State University, June 2020.

42 A brief word on another survey: An unsigned article in *The Economist* ("Too Many Prisons Make Bad People Worse," June 5, 2017) claimed: "A study of over 500 programmes in American prisons, jails and probation agencies by Faye Taxman of George Mason University found that only 20% involved CBT and only about 5% of individuals were likely to have access to it." This appears to be a reference to the National Criminal Justice Treatment Program (NCJTP) survey conducted in the mid-2000s, but we are unable to find these numbers in any of the published materials or replicate them using the survey's public data; reached by e-mail, Taxman could not easily pinpoint the source of the claim that had been attributed to her work. Owing to the complexity of the survey's design, its focus on substance abuse, its age, its exclusion of a key population and settings of relevance (chronically mentally ill inmates and specialized prisons responsible for reception, diagnosis, or classification facilities), and its widely varying responses to CBT-related questions, we opted not to analyze the survey in detail.

43 Amanda Wik, Vera Hollen, and William H. Fisher, "Forensic Patients in State Psychiatric Hospitals: 1999–2016," *CNS Spectrums* 25, no. 2 (2020): 196–206.

44 Shanti Silver and Elizabeth Sinclair Hancq, "Prevention over Punishment: Finding the Right Balance of Civil and Forensic State Psychiatric Hospital Beds," Treatment Advocacy Center, January 2024.

45 National Substance Use and Mental Health Services Survey, Annual Detailed Tables, 231, table MH14a.

46 Ibid., 243, table MH17a.

47 Jacob Kang-Brown et al., "People in Jail and Prison in 2022," Vera Institute, June 2023.

48 Silver and Hancq, "Prevention over Punishment."

49 Texas Department of Criminal Justice, "Rehabilitation Programs Division, Corrective Intervention Pre-Release Program."

50 California Department of Corrections and Rehabilitation, "Cognitive Behavioral Interventions."

51 E.g., nearly 60% of state Departments of Corrections report providing a trauma service called "Seeking Safety," which is described as a "present-focused, cognitive-behavioral psychotherapy" designed to address trauma and substance-use disorder; however, the treatment approach differs from CBT in a notable way: it "attends to the impact of the trauma on clients' lives" to varying degrees and allows clients to "shift their focus to processing their traumatic experiences by participating in a past-focused treatment." The program is described as "evidence-based," but in a recent meta-analysis, support was not consistent or strong, and it did not suggest that the program was superior to CBT itself. See Athena D. F. Sherman et al., "Seeking Safety Intervention for Comorbid Post-Traumatic Stress and Substance Use Disorder: A Meta-Analysis," *Brain and Behavior* 13, no. 5 (May 2023): e2999.

More relevant in the context of criminal offending, only one study examines the effect of the program on incarcerated individuals, so its use over other programs that have stronger evidence in this setting warrants question. (No randomized control trials examine effects on symptoms potentially associated with trauma or drug use past a nine-month window. Few find effects past three months. One study, Anna Cash Ghee, "The Efficacy of a Condensed *Seeking Safety* Intervention for Women in Residential Chemical Dependence Treatment at 30 Days Posttreatment," *Journal of Child Sexual Abuse* 18, no. 5 (September 2009), finds no effect within 30 days. See also Matthew Tyler Boden et al., "*Seeking Safety* Treatment for Male Veterans with a Substance Use Disorder and Post-Traumatic Stress Disorder Symptomatology," *Addiction* 107, no. 3 (March 2012): 578–86, which finds that participants were significantly *more* likely to have used drugs. The overall mechanism of any effect is unclear in that attributes specific to this program model were not definitively responsible for positive effects, as opposed to attributes most related to CBT.

52 William Arbour, "Can Recidivism Be Prevented from Behind Bars?" unpublished manuscript, Oct. 30, 2022.

53 See n. 18 above. Programs included, e.g., Reasoning and Rehabilitation, Moral Reconation Therapy, Aggression Replacement Training, the Thinking for a Change curriculum, and the Cognitive Interventions Program.

54 See discussion in Lipsey, Landenberger, and Wilson, "Effects of Cognitive-Behavioral Programs for Criminal Offenders." See also Washington State Institute for Public Policy, "Cognitive Behavioral Therapy (CBT) (for Individuals Classified as High- or Moderate-Risk)"; Kevin Sammut Henwood, Shihning Chou, and Kevin D. Browne, "A Systematic Review and Meta-Analysis on the Effectiveness of CBT Informed Anger Management," *Aggression and Violent Behavior* 25, part B (November–December 2015): 280–92.

55 See Molly Magill et al., "A Meta-Analysis of Cognitive-Behavioral Therapy for Alcohol or Other Drug Use Disorders: Treatment Efficacy by Contrast Condition," *Journal of Consulting and Clinical Psychology* 87, no. 12 (2019): 1093–1105, a review of CBT for substance-abuse reporting: "CBT is effective for these conditions with outcomes roughly 15%–26% better than average outcomes in untreated, or minimally treated, controls." See also Jennifer L. Harrison, "Sexual Offender Treatment Effectiveness Within Cognitive-Behavioral Programs: A Meta-Analytic Investigation of General, Sexual, and Violent Recidivism," *Psychiatry, Psychology and Law* 27, no. 1 (2020): 1–25, a review of CBT for sex offenders that found a roughly one-third drop in the odds ratio of sexual recidivism with treatment, although this effect was concentrated in studies from the 1990s.

56 James M. Byrne, "The Effectiveness of Prison Programming: A Review of the Research Literature Examining the Impact of Federal, State, and Local Inmate Programming on Post-Release Recidivism," First Step Act Independent Review Committee, December 2019.

57 Faye S. Taxman, "The Partially Clothed Emperor: Evidence-Based Practices," *Journal of Contemporary Criminal Justice* 34, no. 1 (Jan. 15, 2018): 97–114.

58 Gabrielle Beaudry et al., "Effectiveness of Psychological Interventions in Prison to Reduce Recidivism: A Systematic Review and Meta-Analysis of Randomised Controlled Trials," *Lancet Psychiatry* 8, no. 9 (September 2021): 759–73.

59 More precisely, an odds ratio of 1.00, with 1 indicating no effect.

60 Emily Cuddy and Janet Curry, "Rules vs. Discretion: The Treatment of Mental Illness in U.S. Adolescents," National Bureau of Economic Research (NBER), working paper no. 27890 (October 2020; rev. January 2024); Craig J. Bryan, Michael H. Allen, and Charles W. Hoge, "Weighing the Costs and Benefits of Universal Suicide Risk Screening in Primary Care: An Evidence-Based Approach. Psychiatric Services," *Controversies in Psychiatric Services* 74, no. 1 (July 2022): 79–81; Taxman, "The Partially Clothed Emperor," 21.

61 Faye S. Taxman, "Criminal Justice Drug Abuse Treatment Studies (CJ-DATS): National Criminal Justice Treatment Program (NCJTP) Survey in the United States, 2002–2008" (Aug. 9, 2010), 7.

62 Nour Abdul-Razzak and Kelly Hallberg, "Unpacking the Impacts of a Youth Behavioral Health Intervention: Experimental Evidence from Chicago," Annenberg Institute, EdWorking Paper no. 24-1053 (October 2024).

63 Sara B. Heller et al., "Thinking, Fast and Slow? Some Field Experiments to Reduce Crime and Dropout in Chicago," *Quarterly Journal of Economics* 132, no. 1 (February 2017): 1–54.

64 University of Chicago Crime Lab, "Preventing Youth Violence: An Evaluation of Youth Guidance's *Becoming a Man* Program," Oct. 5, 2018.

65 The study also assessed school performance, which is outside our scope here.

66 Monica P. Bhatt et al., "Predicting and Preventing Gun Violence: An Experimental Evaluation of READI Chicago," *Quarterly Journal of Economics* 139, no. 1 (February 2024): 1–56.

67 Estimated based on ibid., tables 2 and 4. The 1,232 members of the control group were arrested for shootings and homicides after the program began at a rate of 2.7% (implying about 33 arrests), while the 1,224 members of the treatment group benefited from an intent-to-treat effect of 1.2 points (implying a rate of 1.5% and about 18 arrests).

68 See, e.g., Live Free Chicago, "Killed, Ignored, Never Forgotten: Chicago's Unsolved Homicides," Jan. 26, 2023.

69 Calculated from Bhatt et al., table 2.

70 Jacqueline M. Swank and Joseph C. Gagnon, "Mental Health Services in Juvenile Correctional Facilities: A National Survey of Clinical Staff," Journal of Child and Family Studies 25 (June 2016): 2862–72; Shafran et al., "Mind the Gap."

71 Jennifer L. Skeem et al., "Offenders with Mental Illness Have Criminogenic Needs, Too: Toward Recidivism Reduction," Law and Human Behavior 38, no. 3 (June 2014): 212–24.

72 Taxman, "The Partially Clothed Emperor."

73 Jennifer Bronson and Marcus Berzofsky, "Indicators of Mental Health Problems Reported by Prisoners and Jail Inmates, 2011–12," Bureau of Justice Statistics (June 2017), table 6.

74 Nathaniel P. Morris and Matthew L. Edwards, "Addressing Shortages of Mental Health Professionals in U.S. Jails and Prisons," *Journal of Correctional Health Care* 28, no. 4 (August 2022): 209–14.

75 Pavel Mohr et al., "Long-Acting Injectable Antipsychotics for Prevention and Management of Violent Behaviour in Psychotic Patients," *International Journal of Clinical Practice* 71, no. 9 (September 2017); Madhav P. Bhatta et al., "Long-Acting Injectable Antipsychotic Use in Patients with Schizophrenia and Criminal Justice System Encounters," *Journal of Health Economics and Outcomes Research* 8, no. 1 (May 2021): 63–70; Brittany Finocchio and Wanda Hilliard, "Therapeutic Outcomes of Treatment with Long-Acting Injectable Antipsychotics in Forensic Populations with Schizophrenia-Spectrum Diagnosis," *Journal of Correctional Health Car*e 30, no. 2 (April 2024): 71–81; Yasin Hasan Balcioglu et al., "Treatment Adherence in Forensic Patients with Schizophrenia Spectrum Disorders Discharged on Long-Acting Injectable Antipsychotics: A Comparative 3-Year Mirror-Image Study," *International Clinical Psychopharmacology* 39, no. 4 (July 2024): 267–75; Taishiro Kishimoto et al., "Long-Acting Injectable vs Oral Antipsychotics for Relapse Prevention in Schizophrenia: A Meta-Analysis of Randomized Trials," *Schizophrenia Bulletin* 40, no. 1 (January 2014): 192–213.

76 Stephen Eide and Carolyn D. Gorman, "Medicaid's IMD Exclusion: The Case for Repeal," Manhattan Institute, Feb. 23, 2021.