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A Structured Evidence Review to Identify Treatment Needs of Justice-Involved Veterans and Associated Psychological Interventions

Prepared for: Veterans Health Administration Homeless Programs Veterans Justice Programs

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Foreword	.1
Executive Summary	.3
Background	.3
Methods	.3
Results	.3
Key Question #1: What are the treatment needs of justice-involved Veterans?	3
Key Question #2: What are the main assessment tools to identify the mental health treatment	
needs and recidivism risk level in justice-involved Veterans?	4
Key Question #3: What are the evidence-based or promising psychosocial treatments for justice-	
involved Veterans with mental health treatment needs?	4
Key Question #4: What are the evidence-based or promising psychosocial treatments for justice-	
involved Veterans at a high risk of recidivism?	4
Key Question #5: What are the factors that impact access to and engagement in treatment for	
justice-involved Veterans?	5
Limitations	.6
Recommendations for Future Research	.6
Introduction	.8
Background	
Services for justice-involved Veterans.	
Key Questions for Review	
-	
Methods1	
Topic Development and Key Questions1	
Search Strategy1	
Peer Review1	.1
Results1	.4
Demographic Characteristics and Offense Profile of Justice-Involved Veterans1	.4
Demographic characteristics1	.4
Service-specific characteristics1	.4
Offense and sentence characteristics1	.4
Subgroup characteristics1	.5
Summary of demographic characteristics and offense profile of justice-involved Veterans1	7،
Key Question #1: What Are the Treatment Needs of Justice-Involved Veterans?1	.7
Overview of general mental health issues1	.8
Psychiatric disorders: non-criminogenic risk factors1	9
Psychiatric disorders: criminogenic risk factors2	24
Co-occurring disorders2	25
Other treatment needs2	25
Summary of Key Question #12	29

Table of Contents

Key Question #2: What Are the Main Assessment Tools to Identify the Treatm	ent Needs and
Recidivism Risk Level in Justice-Involved Veterans?	29
Mental health assessment	
Recidivism risk assessment	
Summary of Key Question #2	
Key Question #3: What Are the Evidence-Based or Promising Psychosocial Trea	atments for Justice-
Involved Veterans with Mental Health Treatment Needs?	35
General mental health treatment	
Summary of Key Question #3	
Key Question #4: What Are the Evidence-Based or Promising Psychosocial Trea	atments for Justice-
Involved Veterans at a High Risk of Recidivism?	
Overview of recidivism research findings.	
Cognitive-behavioral therapy for criminogenic risk factors.	
Specific cognitive-behavioral therapies for criminogenic risk factors.	
Treatment for substance use disorders.	47
Treatments for specific offenses	
Integrated mental health needs with criminogenic risk treatment	
Psychosocial rehabilitation.	53
Summary of Key Question #4	54
Key Question #5: What Are the Factors That Impact Access To and Engagemen	t in Treatment for
Justice-Involved Veterans?	55
Motivation to engage and remain in care	
Treatment courts.	
Peer-based support	
Summary of Key Question #5	61
Summary and Discussion	62
Current Work in VA	
Moral Reconation Therapy.	
Thinking 4 a Change.	
Intimate Partner Violence	
Limitations	65
Strengths	66
Recommendations for Future Research	66
Tables	C 9
Table 1. Demographic and Service Characteristics of Prisoners and Jail Inmates	
Table 1. Demographic and Service Characteristics of Prisoners and Jail Inmates, Table 2. Offense Characteristics of Prisoners and Jail Inmates, By Veteran State	•
Table 2. Offense Characteristics of Prisoners and Jali Inmates, By Veteran Stati Table 3. Prevalence of Mental Health and Medical Needs	
Table 3. Prevalence of Mental Health and Medical Needs Table 4. Prevalence of Substance Use Disorder Needs	
Table 5. Mental Health Assessment Tools	
Table 5. Mental Health Assessment Tools Table 6. Criminogenic Risk Assessment Tools	
Table 0. CHIHHHUgellic Nisk Assessifient 10015	

	Table 7. SAMHSA's GAINS Center – Treatments For the General Mental Health Needs Of Justice-	
	Involved Adults	82
	Table 8. Washington State Institute for Public Policy - Adult Corrections: What Works?	83
	Table 9. The 16 Steps of Moral Reconation Therapy	84
	Table 10. Moral Reconation Therapy Studies	85
	Table 11. Cognitive Centre of Canada - Reasoning and Rehabilitation Program Components	92
	Table 12. Reasoning and Rehabilitation Studies	93
	Table 13. National Institute of Corrections - Thinking 4 a Change Lessons	97
	Table 14. Thinking 4 a Change Studies	98
	Table 15. SAMHSA's GAINS Center - Treatments for justice-involved adults with SUDs	. 100
R	eferences	.101

Foreword

In January 2012, after a one and one-half year strategic planning process and four years into the operation of VA's national effort to provide outreach to incarcerated Veterans, the National Steering Committee of the Veterans Health Administration (VHA) Veterans Justice Outreach Program (VJO) set as one of five strategic goals the matching of justice-involved Veterans with the medical, mental health/psychiatric, vocational, and social services that would improve health and optimize successful community integration and safety for these Veterans. *A Structured Evidence Review to Identify Treatment Needs of Justice-Involved Veterans and Associated Psychological Interventions* was completed in support of that goal.

Undertaken by investigators from the Center for Health Care Evaluation at the VA Palo Alto Health Care System in Menlo Park, California, the structured evidence review is a comprehensive and critical examination of the needs and treatments – in particular psychological treatments – which either are, or are thought to be, relevant to this population of Veterans. A wealth of careful, thoughtful, and clear assessment of the evidence awaits the reader of the structured evidence review. Examination and feedback from research and clinical leaders with long experience in these areas provided critical input to the structured evidence review's final draft.

Intended audiences of the structured evidence review include VA and non-VA clinicians and service providers, criminal justice professionals, researchers and program evaluators, and leadership across all of these domains. Recognizing that there was much work to be done to develop and evaluate treatment, the intended objectives of the structured evidence review are education to set a baseline of the current state of what is known and not known for this population of Veterans, assurance that Veterans are receiving treatments that are supported by the evidence, and highlighting the many areas where further work is needed.

If and as policy prescriptions emerge, Veterans Justice Programs (VJP) and other VHA clinicians as well as non-VA clinicians will search for, and employ, interventions that fill the gaps in meeting the challenging needs of the population not addressed by well established treatment. For those interventions deemed appropriate for which there is little or no evidence, this document is designed to provide information on the state of what is available, and the beginning elements of an agenda for evaluating developmental work through pilots and demonstration so that policy questions such as effectiveness, staffing, and costs can begin to be informed.

It is important to acknowledge that evaluating work in this field is enormously challenging. Research usually requires specialized prisoner representation on Institutional Review Boards (IRB) which is minimally available in VA. IRBs and funding agencies may not support the randomized designs necessary to provide the rigorous evidence needed to evaluate interventions, although a compelling rationale has been put forth to do just this with justice populations (Gueron, 2000). Finally, the complexity of needs of this population strongly suggests the need for combinations of interventions which newly developed effectiveness-implementation hybrid designs may be suited to examine.

Limitations of the structured evidence review at least include feasibility decisions on limits of depth of coverage across such a wide range of domains, and on not highlighting obvious critical dimensions such as psychopharmacology, employment approaches, and impact of environment and stigma. In addition, VA's benefits, medical services, and mental health (broadly), and homeless services were taken as a given for this review.

VJP acknowledges and appreciates the quality of the structured evidence review by CHCE. VJP outlined the general structure and made the decisions regarding domain coverage, and CHCE had license to assess the literature scientifically. We believe the structured evidence review makes a highly significant contribution to VA's mission with justice-involved Veterans:

To partner with the criminal justice system to identify Veterans who would benefit from treatment as an alternative to incarceration. VJO [and HCRV] will ensure access to exceptional care, tailored to individual needs, for justice-involved Veterans by linking each Veteran to VA and community services that will prevent homelessness, improve social and clinical outcomes, facilitate recovery and end Veterans' cyclical contact with the criminal justice system. (Clark, Blue-Howells, Rosenthal, & McGuire, 2010)

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Executive Summary

Background

In order to better serve the population of justice-involved Veterans, the Department of Veterans Affairs (VA) has developed targeted Veterans Justice Programs (VJP), including Veterans Justice Outreach (VJO) and Health Care for Reentry Veterans (HCRV). To support the mission of VJP, this review synthesizes research relevant to (1) the unique treatment needs of justice-involved Veterans, with a primary focus on mental health needs, and (2) evidence-based and promising treatments for addressing these needs. This synthesis of unique treatment needs and best practices can serve as a guide for VJP that will allow it to capitalize on existing strengths of the program and promote further development of evidenced-based programs to address the needs of justice-involved Veterans both within and outside of VA.

Methods

The topic and key questions were developed in collaboration with national program staff from VJP. Given the broad, exploratory nature of this review, we focused on synthesizing previous reviews, metaanalyses, and important reports. We began with a sample of over 200 articles of interest compiled by one of the VJP representatives requesting the review. We categorized these articles and identified further citations by reviewing their reference sections. Additionally, targeted searches were carried out using the search engines Google Scholar, PsycInfo, PubMed, and Web of Science. We also searched for reports on the websites of relevant organizations, such as the US Bureau of Justice Statistics, US National Institute of Justice, SAMHSA's National GAINS Center, and the US Bureau of Prisons.

Results

Key Question #1: What are the treatment needs of justice-involved Veterans? Many justice-involved Veterans have mental health needs that may impact their reentry into the community after incarceration. More than half of justice-involved Veterans have at least one mental health concern, including psychiatric disorders such as mood, substance use, or anxiety disorders. A large number of justice-involved Veterans have had at least one lifetime traumatic experience, with one study reporting past trauma in 87% of Veterans incarcerated in jails. These past traumatic experiences include non-military trauma (e.g., childhood abuse, assault) and military trauma (e.g., combat trauma, military sexual trauma). Justice-involved Veterans may be dealing with ongoing mental health issues as a result; one study found that 39% of Veterans incarcerated in jails screened positive for PTSD.

The subgroup of justice-involved Veterans with combat experience is more likely than other justiceinvolved Veterans to suffer from PTSD. The combination of combat trauma and PTSD may have a particularly strong link to antisocial behavior such as IPV. The general body of research with justiceinvolved adults has highlighted two psychiatric disorders – antisocial personality disorder (ASPD) and substance use disorder (SUD) – as having a uniquely strong and direct link with recidivism. Additionally, SUDs are a concern for nearly two-thirds of justice-involved Veterans (57% in federal prisons and 61% in state prisons), including a large proportion of individuals (over 75%) who have a co-occurring psychiatric disorder. Furthermore, though the actual prevalence is unclear, it is likely that a substantial number of justice-involved Veterans have a history of traumatic brain injury. Most justice-involved Veterans also report a need for medical treatment, with a quarter struggling with chronic pain. Justice-involved older Veterans are particularly likely to need medical treatment and to self-report a disability. Finally, the combination of concerns outlined here puts many justice-involved Veterans at an increased risk of homelessness.

Key Question #2: What are the main assessment tools to identify the mental health treatment needs and recidivism risk level in justice-involved Veterans? As a supplement to clinical interview, objective assessment tools can provide information that is important for linking justice-involved Veterans to appropriate treatment. There are many options for screening and assessment that vary in administration and interpretation time. Thus, it is important to rely on clinical judgment to determine how to prioritize and integrate objective assessment tools. An initial screen for co-occurring psychiatric disorders could be done with the Global Appraisal of Individual Needs (GAIN) combined with the Simple Screening Instrument (SSI). For individuals requiring more detailed assessment, this could be followed by use of the Psychiatric Research Interview for Substance and Mental Disorders (PRISM). Additionally, the Impact of Events Scale-Revised (IES-R) or the PTSD Checklist (PCL) could be used to identify justiceinvolved Veterans who are experiencing distress associated with exposure to a traumatic event. In many settings, the brief PCL, already widely used in VA, may be the most feasible to identify those for followup assessment. Other assessment tools have been developed to assess the level of risk of recidivism in justice-involved adults. These include the Level of Service/Case Management Inventory (LS/CMI) and the Correctional Offender Management Profiling for Alternative Sanctions (COMPAS) assessments, which can be used to focus appropriate resources to justice-involved Veterans who are at high risk of recidivism and are most likely to benefit from such additional attention.

Key Question #3: What are the evidence-based or promising psychosocial treatments for justiceinvolved Veterans with mental health treatment needs? Though specific evidence with justice-involved adults is limited, there are promising options for treatment of mental health concerns in justice-involved Veterans. For example, treatments such as Assertive Community Treatment are recommended, as are treatments informed primarily by cognitive-behavioral therapy (CBT) or Motivational Interviewing. Additionally, research with justice-involved women has shown promise for trauma-informed systems of care such as the Trauma Recovery and Empowerment Model, and there is ongoing research to adapt these findings and apply them to justice-involved men. Psychotherapy specifically recommended for individuals with PTSD, such as Prolonged Exposure Therapy and Cognitive Processing Therapy, are also likely to benefit justice-involved Veterans with PTSD.

Key Question #4: What are the evidence-based or promising psychosocial treatments for justiceinvolved Veterans at a high risk of recidivism? Most of the specific literature about interventions that successfully reduce recidivism is based on the Risk-Need-Responsivity model. This model states that treatments should be targeted at justice-involved adults at high risk of recidivism, should specifically target criminogenic risk factors, and should take into account individual characteristics such as learning style and mental health issues. The most promising interventions include CBT treatments that aim to change antisocial ways of thinking. The most well-known examples of these treatments include Moral Reconation Therapy (MRT), Reasoning and Rehabilitation (R&R), and Thinking 4 a Change (T4C). The most consistent evidence of effectiveness is available for MRT; for example, one meta-analysis found that MRT participants reduced their recidivism by one-third compared to participants who did not receive MRT. The evidence for R&R is less consistent, particularly because one of the major tests of this treatment (Project Greenlight) was not implemented according to recommended guidelines. There is a much smaller amount of research for T4C, but it is widely implemented in criminal justice settings partly because of the low costs of training and materials. In the future, trials with randomized designs would be useful for determining the relative efficacy of these CBT treatments. Furthermore, SUD treatment is also associated with a lower risk of recidivism in addition to benefits on SUD outcomes. A synthesis of systematic reviews found mean reductions in recidivism ranging from 4-24% compared to a range of comparison groups.

For justice-involved Veterans, CBT treatments such as MRT which target criminogenic risk factors (e.g., antisocial thinking) may be useful in treating specific offenses of particular concern for justice-involved Veterans (e.g., sex offenses, IPV, and DUI). In addition, treatments specifically tailored to those offense groups have been tested. Regarding sex offenders, the most promising treatments are CBT-based and incorporate elements targeting general criminogenic risk factors and deviant sexual preferences. There is little evidence supporting particular interventions for IPV perpetrators, though a Veteran-specific intervention aiming to integrate mental health treatment within an intervention to reduce and prevent IPV (Strength at Home) is currently under development. In general, DUI interventions that focus on alcohol use (as opposed to exclusive use of sanctions such as revoking drivers' licenses) have been the most promising, though research has not identified specific interventions that have been consistently effective.

Providing integrated treatment to justice-involved Veterans with co-occurring psychiatric and SUDs may increase the likelihood of positive clinical, social, and recidivism outcomes. Though the evidence remains limited, potentially promising models of care for justice-involved Veterans with co-occurring disorders include Forensic Assertive Community Treatment and Modified Therapeutic Communities. These integrated treatments focus on many aspects of the person's recovery, including SUD treatment, treatment for other mental health conditions, and treatment for criminogenic risk factors.

Key Question #5: What are the factors that impact access to and engagement in treatment for justiceinvolved Veterans? In working with justice-involved Veterans, it can be important to consider and make efforts to improve the level of motivation and readiness for treatment by utilizing motivational assessment and enhancement at the outset of and throughout treatment. Even when there is an initial willingness to enter treatment, many justice-involved adults do not remain in treatment long enough to receive the recommended dose of treatment. Assessment tools such as the Multifactor Offender Readiness Model and the Circumstances, Motivation, Readiness, and Suitability Scale can monitor changes in motivation and readiness and can help to identify justice-involved Veterans who are likely to respond to treatment. There are several strategies and programs that may be helpful in increasing the level of motivation and readiness in this population, which may result in an increased willingness both to enter treatment and to remain engaged over time. One prominent strategy is the use of Motivational Interviewing (MI). In one randomized controlled trial, substance-dependent justice-involved Veterans who received MI feedback were more likely to access addictions treatment at VA after release than were control participants. Other potential interventions include the Critical Time Intervention, which is focused on enhancing engagement in treatment during the transition between prison and the community, and adaptive protocols, which could be used to create decision rules to inform treatment changes based on assessment. Furthermore, Veterans treatment courts (in partnership with VA) have been introduced to link justice-involved Veterans with appropriate services sensitive to the particular needs of Veterans. This includes elements of Veteran peer-support, which has been developed in prisons, jails, and courts to provide emotional support as well as information about available services to justice-involved Veterans.

Limitations

The main limitation of the research reviewed in this report is the low quality of many treatment studies carried out with justice-involved adults. There are few fully randomized trials, and many studies use analysis techniques likely to lead to bias, such as comparing treatment completers to non-completers. Nonetheless, the large volume of research has resulted in some fairly consistent, though broad, conclusions across large reviews (e.g., support for the Risk-Need-Responsivity model and CBT treatments generally). Our search strategy focused on identifying the most influential large reviews and meta-analyses, and consequently we may not have captured all individual treatment studies, particularly if they focused on less-common interventions.

In addition, very little of the intervention research focused on justice-involved *Veterans* specifically. In particular, the literature around trauma-informed interventions for justice-involved adults is limited, and it does not examine ways in which the addition of Veteran-specific trauma may impact outcomes. The wider literature is also limited when it comes to justice-involved women and justice-involved older adults, with no identifiable intervention research with justice-involved women Veterans or justice-involved older Veterans.

Recommendations for Future Research

Based on this review, there are several research questions that still need to be addressed. Many of these research areas pertain to the way that the treatment literature on justice-involved adults can be applied to justice-involved Veterans.

- 1) Do evidence-based treatments that have been shown to reduce recidivism in justice-involved adults similarly reduce recidivism in justice-involved Veterans? As we stated above, most of the trials testing the efficacy of MRT and other treatments were conducted in general justice-involved populations. The next step will be to see if similar efficacy is found when justice-involved Veterans are examined specifically. A related issue is whether or not different adaptations might increase the effectiveness of these treatments. For example, how can treatment for justice-involved Veterans best deal with the variety of past trauma experienced by some justice-involved Veterans?
- 2) Are there identifiable subgroups/typologies of justice-involved Veterans? Research could examine if there are particular treatments that are more or less effective with subgroups of Veterans (i.e., based on their type of offending and other needs). For example, there may be a combat-typology

associated with the perpetration of crimes such as IPV. However, to date, these typologies are mainly speculation, and they call for more rigorous investigations.

- 3) What treatment adaptations might be needed to serve the needs of different demographic groups of justice-involved Veterans? In particular, more research is needed to determine the characteristics of justice-involved women Veterans and to examine how their treatment needs may or may not differ from justice-involved men Veterans. In addition, more research is needed to assess the needs of OEF/OIF/OND Veterans. For example, it is currently unclear what the rate of justice-involvement is for this population. Also, to our knowledge, there are no published studies assessing suicide risk in subgroups of justice-involved Veterans (e.g., women or OEF/OIF/OND) even though high rates of suicide have been reported in both the Veteran population and the criminal justice population.
- 4) How would the implementation of newer treatments focused on reducing recidivism interact with other VA benefits that a justice-involved Veteran may receive? How can these treatments be integrated successfully? What would be the cost of implementing different treatments? For example, MRT and R&R have costs for training and materials, whereas there is no initial charge for the T4C training and materials (although the cost of reproducing T4C materials such as workbooks does fall to the treatment provider).
- 5) How can VJP best interface with outside treatment providers to ensure access to appropriate recidivism-focused interventions for justice-involved Veterans? Should these necessarily be Veteran-specific group treatments? Is there an impact of training community treatment providers to be more informed about Veteran culture and VA-services? What can be done to improve coordination of risk reduction strategies with existing criminal justice supervision and treatment programs among justice-involved Veterans?
- 6) Who are the justice-involved Veterans at high risk of recidivism who would be most likely to benefit from interventions targeting criminogenic risk factors? Are there items currently collected by VJP specialists using the Homeless Operations Management and Evaluation System (HOMES) assessment that could effectively categorize justice-involved Veterans as being at low, moderate, or high risk of recidivism? This could include, for example, items such as age of first arrest, total number of lifetime arrests, and clinical impressions of substance use disorders.
- 7) What is the proportion of justice-involved Veterans who are service-connected for mental health and other issues? How does this relate to the types of crimes committed and the likelihood of incarceration?

Introduction

In order to better serve the population of justice-involved Veterans, the Department of Veterans Affairs (VA) has developed targeted Veterans Justice Programs (VJP), including Veterans Justice Outreach (VJO) and Health Care for Reentry Veterans (HCRV). Although outreach with justice-involved Veterans has been carried out for many years (Kehrer & Mittra, 1978; Nakashima et al., 2006; Pentland & Scurfield, 1982; Stovall, Cloninger, & Appleby, 1997), VJP has created a more extensive and formal link between VA and the justice system. VJO is focused on identifying and contacting Veterans at (1) the point of law enforcement/emergency services, (2) initial detention/initial court hearings, and (3) the jails/courts, and HCRV is focused on identifying and contacting Veterans at (4) reentry after prison/jail sentences (Steps 1, 2, 3, 4 in the Sequential Intercept Model, respectively; Blue-Howells, Clark, van den Berk-Clark, & McGuire, 2013; Munetz & Griffin, 2006). The stated mission of VJO, which is equally applicable to HCRV, is to "ensure access to exceptional care, tailored to individual needs, for justice-involved Veterans by linking each Veteran to VA and community services that will prevent homelessness, improve social and clinical outcomes, facilitate recovery and end Veterans' cyclical contact with the criminal justice system" (Clark, Blue-Howells et al., 2010).

To support this mission, this review synthesizes research relevant to (1) the unique treatment needs of justice-involved Veterans, with a primary focus on mental health needs, and (2) evidence-based and promising treatments for addressing these needs. This synthesis of unique treatment needs and best practices can serve as a guide for VJP that will allow it to capitalize on existing strengths of the program and promote further development of evidenced-based programs to address the needs of justice-involved Veterans both within and outside of VA.

Background

Veterans make up approximately 10% of the incarcerated population (i.e., adults in prison or jail; Greenberg & Rosenheck, 2008; Mumola, 2000; Noonan & Mumola, 2007). The most up-to-date point-intime data indicates that approximately 140,000 Veterans were incarcerated in state or federal prisons in 2004 (Noonan & Mumola, 2007), and approximately 69,300 Veterans were incarcerated in local jails in 1996 (Mumola, 2000). Overall, the incarceration rate in state and federal prisons is about half as high for Veterans (0.63%) compared to non-Veterans (1.39%), although some of this difference is explained by the higher average age of Veterans. The age-adjusted prison incarceration rate remains slightly lower for Veterans (1.25%) in comparison to non-Veterans (1.39%; Noonan & Mumola, 2007). However, these estimates likely represent only a small portion of the total number of justice-involved Veterans, given that approximately 75% of the total U.S. correctional population are on probation or parole in the community rather than incarcerated in prisons or jails (Glaze, 2011).

Services for justice-involved Veterans. When Veterans become involved with the criminal-justice system, this presents an important point of contact for linking Veterans to VA and other Veteran-responsive services for a population that may experience barriers to accessing needed care (Clark, Blue-Howells et al., 2010; Rosenthal & McGuire, 2013). In particular, the treatment of mental health issues of the general Veteran population has been highlighted as a pressing concern for VA (Hawkins, 2010;

SAMHSA National GAINS Center, 2008; Sontag & Alvarez, 2008; Tanielian & Jaycox, 2008), especially given the link between mental health issues and justice-involvement in some Veterans (e.g., Byrne & Riggs, 1996; Erickson, Rosenheck, Trestman, Ford, & Desai, 2008; Fontana & Rosenheck, 2005; Greenberg & Rosenheck, 2009; Saxon et al., 2001). In this review, we will focus primarily on the mental health needs of justice-involved Veterans, with a minor focus on other needs. Summary data shows that 32-62% of justice-involved Veterans contacted by VJP outreach workers needed mental health treatment, 38-66% needed substance abuse treatment, and 52-60% needed medical treatment (Department of Veterans Affairs, 2012b). Currently, VA provides services that may be able to address these needs, and VJP's outreach program expands VA's ability to provide these services to justice-involved Veterans to other VA benefits, such as those aimed at preventing and ending homelessness.

The majority of Veterans in prison have at least one prior conviction (as do non-Veterans in prison; Noonan & Mumola, 2007), and VJP summary data shows a mean of eight prior arrests across all Veterans encountered as part of the program over one year (Department of Veterans Affairs, 2012b), indicating that some justice-involved Veterans are caught in a resource-intensive cycle of contact with the criminal justice system. Consequently, along with ensuring that the justice-involved Veterans can access care for general mental and physical health problems, a related goal of VJP is to reduce recidivism¹. We therefore focus part of this report on treatments that can be effective at reducing recidivism in high-risk populations. Specialized interventions have been carefully designed for adults assessed as being at high-risk for recidivism. These interventions aim to reduce particular skills deficits and change antisocial ways of thinking - factors that have been shown to have a direct association with recidivism (Andrews & Bonta, 2010b). Contact with justice-involved Veterans presents an opportunity for VJP to link those Veterans to services targeted at additional needs that may directly reduce future offending.

Key Questions for Review

This report intends to support the VJP aim of "effectively matching Veterans to appropriate treatment" (Clark, Blue-Howells et al., 2010, p. 3) by providing a review of the literature for five key questions. The results section will begin by providing a descriptive overview of the justice-involved Veteran population, focused on demographic and offense characteristics. Key Question #1 will examine the needs of justice-involved Veterans as compared to other justice-involved adults to highlight the parallel and unique needs of justice-involved Veterans. Key Question #2 will examine assessment tools that may be used to identify the needs of justice-involved Veterans. Key Questions #3 and #4 will identify evidence-based and promising psychosocial treatments for justice-involved Veterans. Key Question #5 will identify some important factors that impact access to and engagement in treatment for justice-involved Veterans. Each topic area in the report will include a subsection called "Veteran specific research," in which we

¹The definition of recidivism in this context refers generally to reducing contact with the criminal justice system (e.g., re-arrest, re-conviction, re-sentencing, or re-incarceration).

will review the available research that specifically relates to Veterans and/or justice-involved Veterans. Additionally, where available, we will also include subsections highlighting research focused on three subgroups of justice-involved Veterans: justice-involved women Veterans, justice-involved older Veterans, and justice-involved Veterans who served in Iraq and Afghanistan in Operations Enduring Freedom, Iraqi Freedom, New Dawn (OEF/OIF/OND).

Methods

Topic Development and Key Questions

The topic and key questions were developed in collaboration with national program staff from the Veterans Justice Programs. The key questions are:

Key Question #1: What are the treatment needs of justice-involved Veterans?

Key Question #2: What are the main assessment tools to identify the mental health treatment needs and recidivism risk level in justice-involved Veterans?

Key Question #3: What are the evidence-based or promising psychosocial treatments for justiceinvolved Veterans with mental health treatment needs?

Key Question #4: What are the evidence-based or promising psychosocial treatments for justiceinvolved Veterans at a high risk of recidivism?

Key Question #5: What are the factors that impact access to and engagement in treatment for justiceinvolved Veterans?

Search Strategy

Given the broad, exploratory nature of this review, we focused on synthesizing previous reviews, metaanalyses, and important reports. We began with a sample of over 200 articles of interest compiled by one of the Veterans Justice Program representatives requesting the review. We categorized these articles and identified further citations by reviewing their reference sections. Additionally, targeted searches were carried out using the search engines Google Scholar, PsycInfo, PubMed, and Web of Science. These searches included justice-involvement terms (e.g., justice-involved, offender*, criminal*, prison*, parole*, probation*, inmate*, incarcerat*²) along with particular subject terms (e.g., needs, psychiatric, mental illness, recidivism, intervention*, treatment*), study-related terms (e.g., review, systematic, meta-analysis, controlled), or the term veteran*. We also searched for reports on the websites of relevant organizations, such as the US Bureau of Justice Statistics, US National Institute of Justice, SAMHSA's National GAINS Center, and the US Bureau of Prisons.

Peer Review

Ten experts from a range of specialties, including mental health, criminal justice interventions, addiction, trauma, violence, and traumatic brain injury, provided feedback on this review. Their feedback and suggestions strengthened this evidence review and resulted in changes to wording and

² This wildcard was used so that the search would capture both "incarceration" and "incarcerated".

flow as well as inclusion of additional citations of relevant work. Changes made as a result of reviewer comments include (but are not limited to) the following:

- In Key Question #1, we clarified discussions of particular psychiatric conditions, and revised the traumatic brain injury section to provide a better overview of TBI in justice-involved populations and to incorporate recent research relevant to OEF/OIF/OND Veterans.
- In Key Question #2, we expanded our discussion of assessment tools to include additional tools highlighted by reviewers (e.g., the ASSIST, the ORAS, and the Psychopathy Checklist), and we included further information on Veteran-specific research focused on risk factors for perpetration of violence.
- Throughout Key Questions #3 and #4, we incorporated more specific information regarding the magnitude of effects of the treatments in the studies we reviewed to further reinforce the often small effects of the treatments. Additionally, we added in a new section ("Psychosocial rehabilitation") that highlights further promising targets for treatment.
- In Key Question #5, we incorporated additional background information related to willingness of justice-involved adults and justice-involved Veterans to enter into treatment, and we improved the flow of the discussion on treatment courts.

Finally, in some cases, the reviewers asked additional questions that were either outside of the scope of the review, or for which there was no relevant literature identified. We incorporated these questions into our recommendations for future research.

The reviewers included:

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Results

Demographic Characteristics and Offense Profile of Justice-Involved Veterans

The most up-to-date and comprehensive resource for information about justice-involved Veterans is a U.S. Bureau of Justice Statistics (BJS) report examining point-in-time state and federal prison data from 2004 and thus will be a primary resource in the following sections covering demographic and offense characteristics, as well as treatment needs of justice-involved Veterans (Noonan & Mumola, 2007). An earlier BJS report additionally provides information about Veterans who were in local jails in 1996 (Mumola, 2000). However, it is important to note that the BJS reports do not provide direct information about Veterans under community supervision (e.g., Veterans on parole or probation), and do not provide information about service members who have returned from OEF/OIF/OND since 2004.

Demographic characteristics. Veterans in prisons and jails tend to be older (i.e., median age 10-12 years older), more educated, and more likely to be white non-Hispanic than non-Veterans. While there is no difference in marital status among federal prisoners, Veterans in state prisons and local jails are more likely than non-Veterans to be married (Mumola, 2000; Noonan & Mumola, 2007; White, Mulvey, Fox, & Choate, 2012). Additionally, non-white Veterans are more likely to be incarcerated than white Veterans, but they are less likely to be incarcerated than their non-Veteran counterparts (Greenberg, Rosenheck, & Desai, 2007; Tsai, Rosenheck, Kasprow, & McGuire, 2013b).

Service-specific characteristics. A majority of Veterans in prisons and jails served in the Army (56-57%), and they served for a mean of approximately four years. Almost one quarter (20-26%) of Veterans in these settings had combat experience. Approximately 80% of Veteran prisoners were discharged as honorable or general under honorable conditions (Mumola, 2000; Noonan & Mumola, 2007). See Table 1.

Offense and sentence characteristics. More than half (57%) of Veterans in *state* prisons had been convicted of a violent crime, compared to 47% of non-Veterans. In particular, nearly 25% of Veterans in state prisons were convicted of sexual assault compared to less than 10% of non-Veterans. Among state prisoners convicted of a violent crime, the victims were more likely to be female and more likely to be minors (12 years or younger) for Veteran offenders compared to non-Veteran offenders. Veterans convicted of a violent crime were also more likely than non-Veterans to have known their victim. For example, 25% of Veterans convicted of a violent crime were less likely than non-Veterans to have used a weapon during a violent crime (Noonan & Mumola, 2007). Nonetheless, Veterans in state prisons reported longer sentences than non-Veterans, regardless of offense type (Noonan & Mumola, 2007). See Table 2.

The pattern of offenses was somewhat different among *federal* prisoners. The most common offense (46%) among Veterans in federal prisons was a drug offense. However, Veterans had a lower rate of drug offense when compared to non-Veterans (56%). They had higher rates of violent offenses (19%) than non-Veterans (14%), as was the case in state prisons (Noonan & Mumola, 2007). See Table 2.

Finally, among jail inmates, Veterans and non-Veterans had similar rates of violent and property offenses (with each making up a quarter of offenses for both populations). Veterans in local jails had a lower rate of drug offenses but a higher rate of public-order offenses compared to non-Veterans (Mumola, 2000). See Table 2.

Administrative data on Veterans contacted by HCRV and VJO specialists in prisons (HCRV) and in courts and jails (VJO) provides some further insight into the offense profile of justice-involved Veterans (Department of Veterans Affairs, 2012b). Among Veterans contacted by HCRV, the most common current offense was a violent one (36%), followed by drug offenses (21%) and property offenses (20%). Considering that this sample combines Veterans contacted in both federal and state prisons, it is broadly in line with the BJS data discussed above. The VJO sample provides additional information about justiceinvolved Veterans contacted in courts and jails. The most common offense in this sample was a public order offense (e.g., a weapons offense, public intoxication, or disorderly conduct; 29%), though violent offenses (25%) and drug offenses (22%) were also prevalent. Notably, 24% of Veterans contacted by VJO had a current charge of driving under the influence (DUI) as part of their case, while 17% had a domestic dispute as part of their current case.

A review of studies examining perpetration of intimate partner violence (IPV) among Veterans found prevalence estimates up to three times higher than those of civilians, ranging from 14-58% for the Veteran population. However, the higher estimates were generally found in samples with more mental health issues (Marshall, Panuzio, & Taft, 2005).

Although there are differences in the offense profile of justice-involved Veterans and non-Veterans, it is clear that consideration of the full range of offense categories is important for both groups. While there is a crucial subgroup of Veterans who struggle in particular with violence (often IPV), many justice-involved Veterans have committed drug offenses (or other offenses that may be directly related to drug use), property offenses, and public order offenses. Further examination of these offense categories may be helpful in informing care for justice-involved Veterans.

Subgroup characteristics.

Women Veterans. Beginning in the 1980's and continuing today, VA has taken steps to improve care for women Veterans (Department of Veterans Affairs Women Veterans Task Force, 2012), and VJP has adopted a similar focus of providing justice-involved women Veterans with care of the same standard as that provided to justice-involved men Veterans. Although women represent a small proportion of the justice-involved Veteran population (i.e., only about 1% of Veterans in both state and federal prisons were women, compared with 7-8% of non-Veterans; Noonan & Mumola, 2007) it is important to consider their unique treatment needs given that their presence in the military is steadily increasing, and this may lead to a proportional increase in the number of justice-involved women Veterans in the years to come. Women currently make up approximately 15% of active duty service-members and 18% of national guard and reserve service-members (Department of Veterans Affairs Woman Veterans Health Strategic Health Care Group, 2012). By 2020, women are projected to make up 11% of the

Veteran population, up from 4% in 1990 (Department of Veterans Affairs Office of Policy and Planning, 2007; Department of Veterans Affairs Women Veterans Task Force, 2012).

Our search of the literature did not reveal research that specifically pertains to justice-involved women Veterans. Thus, we will extrapolate from the literature examining justice-involved women who are not necessarily Veterans. Though women continue to make up only a small portion of the adult correctional population, the incarceration rate of women is increasing at a faster rate than that of men (Sabol & Couture, 2008). Justice-involved women are of a similar age to justice-involved men, such that the median age of women in state prisons is 33 and in federal prisons is 36, compared to 33 and 34 years respectively for non-Veteran men (see Table 1; Greenfeld & Snell, 1999). Because of the increase of young women in the military, the proportion of women under 35 years old (20% of women veterans) is larger than the proportion of men under 35 years old (7% of men Veterans; National Center for Veterans Analysis and Statistics, 2011). More research is needed to examine the risk of offending for this younger group of women Veterans.

In general, justice-involved women have a different offense profile than justice-involved men, with lower overall offending rates for most types of crimes, including much lower rates of violent offending (22% of all those arrested and 17% of those arrested for violent offenses are women; Greenfeld & Snell, 1999). Women are arrested more frequently than men for prostitution and embezzlement, while larceny and drug possession are also common offenses among justice-involved women (Lewis, 2006). Justice-involved women generally have somewhat lower rates of recidivism than men; for example, 58% of women prisoners released in 1994 were re-arrested within three years compared to 68% of men (Langan & Levin, 2002).

Older Veterans. Just as the overall Veteran population is concentrated in older age groups (e.g, 69% of men Veterans are at least 55 years old; National Center for Veterans Analysis and Statistics, 2011), the percentage of justice-involved adults who are Veterans is disproportionately higher for older age groups. For example, in a 2004 survey of prisoners who were at least 55 years old and within two-years of release, 40% were Veterans (Williams et al., 2010). Approximately 1 in 5 Veterans in state and federal prisons is at least 55 years old (Noonan & Mumola, 2007). Additionally, there is an increasing number of elderly prisoners who are serving long sentences as a result of mandatory minimum sentencing laws (Reimer, 2008), and this population may have unique service needs. For example, despite having a lower risk of recidivism (Langan & Levin, 2002), they are likely to have a greater need for medical and other support services (Williams & Abraldes, 2007).

OEF/OIF/OND Veterans. Research is still developing in the area of justice-involved OEF/OIF/OND Veterans. There is no comprehensive information about rates of offending in this group, but there is general concern about how their particular experiences may (or may not) impact rates and types of offending. One recent study of 1,388 Veterans who served after September 11, 2001 found that 10% of the men and 3% of the women had been arrested at least once since being deployed (Elbogen, Johnson, Newton et al., 2012). As will be further detailed later in the report, the authors of this study emphasized the associations between arrests and both military factors (PTSD with high levels of anger/irritability) and non-military factors (a history of previous arrest and/or substance abuse).

SAMHSA's National GAINS Center (2008) has highlighted justice-involved combat Veterans of recent wars as an important target for services. Compared to previous conflicts, OEF/OIF/OND have been associated with uniquely widespread experience of multiple and long deployments with shorter rest periods, as well as an increased rate of survival after serious battlefield injuries due to medical advances (SAMHSA National GAINS Center, 2008; Tanielian & Jaycox, 2008). Those factors, along with widespread deployment of National Guard and Reserve units who may have received less preparation for war experiences, may put OEF/OIF/OND Veterans at particular risk of the development of mental health conditions (SAMHSA National GAINS Center, 2008). A widely cited report by the RAND Corporation found that 1 in 5 OEF/OIF/OND Veterans reported a current mental health condition. However, only half of those receiving a PTSD or depression diagnosis had sought treatment in the previous year, and only half of those seeking treatment received "minimally adequate" services (Tanielian & Jaycox, 2008). Another study found that only one-third of Veterans referred to a VA mental health clinic following a post-deployment health screen actually attended an appointment within 30 days of the screen (Seal et al., 2008). Finally, there are additional general concerns about adjustment back to civilian life after deployment. Specifically, though training and skills such as "[h]ypervigilance, aggressive driving, carrying weapons at all times, and command and control interactions" are important while deployed, they may in some cases result in justice-involvement for those with readjustment difficulties (SAMHSA National GAINS Center, 2008, p. 5).

While there may be some sources of increased stress that are unique to the OEF/OIF/OND conflicts, the resulting concerns are not exclusive to Veterans of recent wars (Pentland & Dwyer, 1985). The long-term impact of such experiences should be taken into consideration for Veterans from all eras. Nonetheless, although the impact of these experiences on future justice-involvement is unclear, further examination of justice-involvement in OEF/OIF/OND Veterans may help bring positive outcomes for this group in particular.

Summary of demographic characteristics and offense profile of justice-involved Veterans. Justiceinvolved Veterans are a heterogeneous group in regards to demographic and offense characteristics, reflecting the diversity of Veterans overall. Veterans in prisons and jails tend to be older, more educated, and more likely to be white non-Hispanic than non-Veterans. Almost one quarter of Veterans in these settings have combat experience. In terms of offense characteristics, there is particular concern regarding the relatively higher prevalence of violent crimes (such as IPV) among incarcerated Veterans compared to incarcerated non-Veterans.

Key Question #1: What Are the Treatment Needs of Justice-Involved Veterans?

Many justice-involved adults have mental health and medical treatment needs that put them at an increased risk of negative outcomes, such as homelessness and/or mental health or medical crises in the community (Mallik-Kane & Visher, 2008; McGuire, 2007; Solomon, Visher, La Vigne, & Osborne, 2006). In one survey of state prisoners returning to the community, 84% of men and 92% of women reported at least one chronic psychiatric, substance use, or physical health condition, with 39% of men and 62% of women reporting more than one type of diagnosis (Mallik-Kane & Visher, 2008). Therefore, the provision of medical and mental health services to justice-involved adults is likely to have a significant

impact on decreasing the risk of negative outcomes for the offender and for the communities to which they return (National Commission on Correctional Health Care, 2002). Indeed, ensuring access to this type of comprehensive care to Veterans in the criminal justice system is a major goal of VJP. The period of reentry after incarceration is associated with an increased risk of death for justice-involved adults overall (Binswanger et al., 2007; Wortzel, Blatchford, Conner, Adler, & Binswanger, 2012), but the receipt of VA benefits has been shown to be associated with a reduction in the risk of death for Veterans during this important time (Wortzel et al., 2012). Determining the specific treatment needs of justiceinvolved Veterans can contribute to the design and improvement of services to assist this population. Therefore, the following sections outline the prevalence of mental health and other needs of justiceinvolved adults (or Veterans in particular where available).

Overview of general mental health issues. The high proportion of justice-involved adults who have mental health issues, which are often untreated or inadequately treated, is an area of top concern noted by government agencies (e.g., Council of State Governments, 2002; SAMHSA National GAINS Center, 2008). Estimates of the prevalence of mental health concerns and psychiatric disorders in justice-involved populations vary greatly, but they consistently imply a significant need for mental health treatment (e.g., Andrews & Bonta, 2010a; Black, Gunter, Loveless, Allen, & Sieleni, 2010; Diamond, Wang, Holzer, Thomas, & Cruser, 2001; Fazel & Seewald, 2012; James & Glaze, 2006; Steadman, Osher, Robbins, Case, & Samuels, 2009).

In this section, we present two groups of mental health needs of justice-involved Veterans, organized according to research showing that some mental health concerns are related to recidivism (i.e., they are criminogenic risk factors) while others are not. We will describe criminogenic risk factors in more detail in the following Key Questions, but briefly, they include those individual characteristics that have been consistently shown to be associated with recidivism in justice-involved populations, such as antisocial attitudes or associates; family dysfunction; and substance problems (Andrews & Bonta, 2010b). Two psychiatric disorders considered major criminogenic risk factors are antisocial personality disorder (ASPD) and substance use disorder (SUD). On the other hand, symptoms of depression, for example, have been shown to be only weakly associated with recidivism (Andrews & Bonta, 2010b). However, as stated above, any untreated healthcare needs can lead to negative outcomes such as increased emergency room use, hospitalization and homelessness (Mallik-Kane & Visher, 2008).

Prevalence of mental health issues. Estimates of the prevalence of mental health issues in justiceinvolved adults vary depending on the measure and time period examined (see Table 3).³ Approximately 45-64% of incarcerated men and 61-75% of incarcerated women report one or more mental health issue within the past year, with higher rates in local jails than in state and federal prisons (James & Glaze, 2006). Differences were also found by age, with fewer prisoners aged 55 or older (40-52%) reporting mental illness symptoms in the past year compared to those aged 24 or younger (56-70%; James & Glaze, 2006). Using more strict measures to identify serious mental health issues, the prevalence

³ These measures do not include personality disorders, and the researchers generally present rates of SUDs separately. These will be addressed individually in subsequent sections below.

estimates are much lower. Only 8% of the jail inmates in the sample discussed above "reported having a mental or emotional condition that kept them from participating fully in school, work, or other activities" (Maruschak, 2006, p. 1). In another sample of jail inmates, 15-17% of men and 31-34% of women had a current (past-month) diagnosis of a serious psychiatric disorder (Steadman et al., 2009). See Table 3.

<u>Veteran-specific research.</u> According to the BJS report, Veterans and non-Veterans in state prisons reported a similar rate (54% for Veterans compared to 56% for non-Veterans) of having at least one mental health concern (see Table 3). However, Veterans in state prison were more likely than non-Veterans to have had a recent history of mental health *services*, possibly related to access to VA services, more severe symptoms, or the older average age of Veteran inmates (Noonan & Mumola, 2007).

To our knowledge, there are no studies assessing the overall prevalence of mental health concerns in the subgroups of justice-involved women and OEF/OIF/OND Veterans.

<u>Older Veterans.</u> In a sample of prisoners who were at least 55 years old and within two years of release, researchers found no difference between Veterans and non-Veterans in reports of a serious mental illness, including post-traumatic stress disorder (PTSD), with a rate of 14% for both groups (Williams et al., 2010).

Psychiatric disorders: non-criminogenic risk factors.

Mood disorders. Data obtained from a BJS Special Report that surveyed a large sample of federal prison, state prison, and local jail inmates indicate that justice-involved adults experience a range of symptoms of major depression (James & Glaze, 2006). Approximately 16-30% of inmates report 5 or more symptoms of major depression during the prior year. Unfortunately, the prevalence of specific diagnoses cannot be reported, as the survey used does not map directly onto diagnostic criteria for each mood disorder, specify a period of time for symptom duration, or exclude symptoms related to medical illness, bereavement, or substance abuse. However, other studies that have focused on current diagnoses of jail inmates revealed lower prevalence of mood disorders (with a prevalence of 1% for a current manic episode and 3% for major depressive disorder, MDD, among men; Teplin, 1994). Consistent with gender differences in the general population, women jail-detainees reported a higher rate of MDD (14%) than men (3%; Teplin, 1994; Teplin, Abram, & McClelland, 1996). See Table 3 for a listing of specific symptoms and more detailed information about symptom breakdown.

<u>Veteran-specific research.</u> According to administrative data based on the clinical impressions of HCRV outreach workers, approximately 28% of Veterans contacted through outreach in prison have a mood disorder (Tsai, Rosenheck, Kasprow, & McGuire, 2013c).

Women Veterans. To our knowledge, there are no studies assessing the prevalence of mood disorders in justice-involved women Veterans.

Older Veterans. In a sample of Veteran prisoners who were at least 55 years old and within two years of release, 14% reported having a depressive disorder, while 7% had bipolar disorder or mania (Williams et al., 2010).

OEF/OIF/OND Veterans. According to administrative data based on the clinical impressions of HCRV outreach workers, approximately 33% of OEF/OIF/OND Veterans in prison have a mood disorder (Tsai et al., 2013c).

Psychotic disorders. Although the BJS survey did not provide information for specific psychotic disorders, 10-24% of inmates reported experiencing at least one symptom of psychosis in the past year. Specifically, 8-18% reported prior-year delusions, while 4-14% reported prior-year hallucinations, with rates lowest in federal prisons and highest in local jails (James & Glaze, 2006). When limited to current diagnoses of a psychotic disorder, the prevalence is approximately 2-3% of local jail inmates (Teplin, 1994; Teplin et al., 1996). Notably, though there is no significant association overall, there is a subgroup of offenders with psychosis (approximately 10%) in whom there is a direct link between their psychosis and their offending (Junginger, Claypoole, Laygo, & Crisanti, 2006; Peterson, Skeem, Hart, Vidal, & Keith, 2010). See Table 3.

<u>Veteran-specific research</u>. According to administrative data that are based on the clinical impressions of HCRV outreach workers, approximately 7% of Veterans in prison have a psychotic disorder.

Women Veterans. To our knowledge, there are no studies assessing the prevalence of psychotic disorders in justice-involved women Veterans.

Older Veterans. In a sample of Veteran prisoners who were at least 55 years old and within two years of release, 4% reported having schizophrenia or another psychotic disorder (Williams et al., 2010).

OEF/OIF/OND Veterans. According to administrative data based on the clinical impressions of HCRV outreach workers, approximately 7% of OEF/OIF/OND Veterans in prison have a psychotic disorder.

Suicide. Suicide risk is related to many of the mental health issues discussed in this section and is an important concern for justice-involved adults at all stages of the justice system (Binswanger et al., 2007; Webb et al., 2011). It is one of the leading causes of death in both jails and prisons, and efforts have been made to develop specific policies and staff training to identify and assist suicidal inmates (Hayes, 2010).

<u>Veteran-specific research.</u> Given that Veterans are twice as likely to die of suicide as non-Veterans and that incarcerated men may be five times more likely to commit suicide than the general population, incarcerated Veterans may experience a higher risk of suicide than either population alone (Frisman & Griffin-Fennell, 2009; Wortzel, Binswanger, Anderson, & Adler, 2009). However, one study has shown that during reentry after a period of incarceration, Veterans did not have a higher risk of death by suicide than non-Veterans (Wortzel et al., 2012).

To our knowledge, there are no published studies assessing suicide risk in the subgroups of justiceinvolved women Veterans, justice-involved older Veterans, or justice-involved OEF/OIF/OND Veterans. *Trauma/Post-traumatic stress disorder (PTSD).* Many justice-involved adults have experienced traumatic events. These events may have happened in childhood and/or adulthood while living in the community or while incarcerated. Approximately 25% of incarcerated men and at least 50% of incarcerated women report experiencing physical or sexual abuse at some point in their lifetime (James & Glaze, 2006; Wolff & Shi, 2010). In addition, while incarcerated, the estimated 6-month rate of physical victimization is 10-21%, and the estimated 6-month rate of sexual victimization is 4-21%, with women having higher rates of sexual victimization than men (Beck & Harrison, 2007; Wolff, Blitz, Shi, Bachman, & Siegel, 2006; Wolff & Shi, 2010).

The population that is most-often victimized frequently overlaps with those who have more complex treatment needs. Individuals with past experiences of victimization are more likely to experience victimization while incarcerated, and those who experience violent victimization in prison are more likely to report that they need mental health treatment than inmates who have not experienced such trauma in prison (Wolff & Shi, 2010). Inmates with a mental health problem are three times more likely to have a history of physical or sexual victimization than those without a mental health problem (James & Glaze, 2006).

Justice-involved adults who have had prior traumatic experiences may have related mental health needs such as PTSD, and at least 1 in 5 jail and prison inmates meet criteria for current PTSD (Powell, Holt, & Fondacaro, 1997; Teplin et al., 1996; Zlotnick, 1997). In the general population, an estimated 15-24% of those experiencing a traumatic event go on to struggle with PTSD, with a higher rate among women than men (Wolff & Shi, 2010). See Table 3.

<u>Veteran-specific research.</u> In addition to the types of trauma outlined above, Veterans may have servicerelated trauma experiences, such as combat trauma, military sexual trauma (MST), or other traumatic experiences such as non-combat traffic accidents occurring during service. Consequently, justiceinvolved Veterans may be additionally likely to have trauma-related mental health issues.

In one study of jail-incarcerated (mostly men) Veterans, 87% reported a history of trauma (which may have included childhood neglect and abuse, combat trauma, witnessing a death or injury, and/or sexual assault or rape) and 39% screened positive for PTSD (Saxon et al., 2001). The most common types of trauma were: being physically assaulted or threatened with a weapon (50% reported this), being physically abused as a child (25%), and experiencing combat trauma (25%; Saxon et al., 2001). The Veterans who screened positive for PTSD had a greater variety of traumas, more current legal problems, more alcohol and drug use, more psychiatric symptoms and worse general health. Veterans who screened positive for PTSD also reported more previous mental health, medical, and SUD treatment (Saxon et al., 2001).

Furthermore, a history of trauma is likely to be common among justice-involved women Veterans, given the high rates of past trauma among both justice-involved women and women Veterans generally. Women Veterans report rates of lifetime trauma higher than those for women in the general population, with 81-93% reporting at least one lifetime trauma (Zinzow, Grubaugh, Monnier, Suffoletta-Maierle, & Frueh, 2007). *Combat trauma*. Up to one-quarter of incarcerated Veterans have combat experience, though these data do not estimate how many in that group suffer from lasting mental health effects (Noonan & Mumola, 2007; Saxon et al., 2001). However, in a subsample of prisoners at least 55 years old and within two years of release, the only significant difference in the prevalence of serious mental health disorders among Veterans and non-Veterans was a higher rate of PTSD among combat Veterans (24%) compared to non-combat Veterans (7%) and non-Veterans (2%; Williams et al., 2010).

Some research has found that pre-military factors (e.g., a conduct disorder and/or family instability in childhood) were more strongly associated with post-military antisocial behavior than military factors such as combat trauma (Elbogen, Johnson, Newton et al., 2012; Fontana & Rosenheck, 2005; Greenberg et al., 2007). However, there is emerging evidence that there may be a subgroup of Veterans for whom their antisocial behavior, and perpetration of violence in particular, is more directly linked with their service experience and specifically with combat-related PTSD. Combat experience may also magnify the risk from pre-military factors (Beckerman & Fontana, 1989; Boivin, 1987; Byrne & Riggs, 1996; Greenberg & Rosenheck, 2009; Jordan et al., 1992; Savarese, Suvak, King, & King, 2001; Sparr, Reaves, & Atkinson, 1987; Taft et al., 2005). This interplay of military and non-military risk factors was highlighted in a review by Elbogen et al. (2010), in which the authors identified factors empirically associated with both intimate partner violence (IPV) and general interpersonal violence in Veterans, including younger age, history of arrests/violence, history of child maltreatment, high combat exposure, PTSD, substance abuse, depression, and financial troubles.

Monson et al. (2009) reviewed a variety of studies and concluded that combat-exposed Veterans *without* PTSD perpetrated IPV at rates similar to those of the general non-Veteran population, but combat-exposed Veterans *with* PTSD perpetrated IPV at consistently higher rates. Similarly, Marshall et al. (2005) found that increased PTSD symptomatology accounted for a relationship between combat exposure and IPV. A series of studies by Maguen et al. examined the particular impact of the experience of killing in war, independent of general combat exposure, on OIF, Gulf War, and Vietnam Veterans. They found that killing was particularly associated with increased PTSD symptoms, alcohol use disorders, anger, and relationship problems (Maguen et al., 2010; Maguen et al., 2009; Maguen et al., 2011). Litz et al. (2009) have argued that killing as well as other war-related transgressions, whether within the rules of engagement or not, create risk for a unique syndrome of psychological, social, and behavioral difficulties not well captured by the PTSD diagnosis, which they call *moral injury*. Moral injury is defined as the lasting psychological, biological, spiritual, behavioral, and social impact of perpetrating, failing to prevent, or bearing witness to acts that transgress deeply held moral beliefs and expectations.

Military sexual trauma. As mentioned previously, an additional source of service-related trauma in Veterans is MST. Estimates of MST in the general population of Veterans range from 1% for men to 15-40% for women (Kelly, Skelton, Patel, & Bradley, 2011; Kimerling et al., 2010). In a sample of OEF/OIF/OND Veterans, men and women who screened positive for MST were significantly more likely to have received a mental health diagnosis than those who screened negative. There was a particularly strong association between MST and PTSD among women (Kimerling et al., 2010). Furthermore, in a study of women Veterans seeking VA mental health care, 95% of the women with a history of MST had also experienced at least one other lifetime trauma and 41% also reported combat-related trauma. Childhood trauma was associated with chronic pain, and combat-related trauma was associated with violence and anger. Overall, the sample had high levels of PTSD and MDD (Kelly et al., 2011).

Women Veterans. To our knowledge, there are no published studies on the prevalence of traumatic experiences and/or PTSD among justice-involved women Veterans in particular. Nonetheless, the research reviewed above indicates that many women Veterans may have a variety of traumatic experiences in their past, and this range of concerns should be considered when planning the best course of treatment.

Older Veterans. In a sample of Veteran prisoners who were at least 55 years old and within two years of release, 35% reported combat experience, while 13% reported having PTSD (Williams et al., 2010).

OEF/OIF/OND Veterans. As mentioned earlier, there is general concern about the widespread, often extensive, exposure to trauma among OEF/OIF/OND Veterans (Brown, 2008). Administrative data from HCRV has found an acute need to address combat trauma among justice-involved Veterans in this group. Although OEF/OIF/OND Veterans made up only a small proportion of the incarcerated Veterans contacted by HCRV from 2007 to 2011, they had particularly high rates (38%) of combat-related PTSD compared to other incarcerated Veterans (5%). Among incarcerated OEF/OIF/OND Veterans, the only psychiatric disorders more common than combat-related PTSD were SUDs, with a prevalence of 45% each for alcohol and drug use disorders (Tsai et al., 2013c).

Recent research has begun to examine the relationship between the military experience of OEF/OIF/OND Veterans and becoming involved in the criminal justice system. The results fall broadly in line with the more general combat trauma research mentioned above. One recent study compared frequency of IPV among three groups: OEF/OIF/OND Veterans *without* PTSD, OEF/OIF/OND Veterans *with* PTSD, and Vietnam Veterans *with* PTSD. Few comparisons reached significance (possibly limited by a small sample size; N = 86), but the OEF/OIF/OND Veterans with PTSD were most likely to report at least one incident of perpetrating physical assault and they reported the highest mean number of incidents (p < 0.1) across the three groups (Teten et al., 2010).

There is some evidence of a relationship between PTSD and justice-involvement by way of increased anger, hostility and aggression. One study found that OEF/OIF Veterans exhibiting even sub-threshold symptoms of PTSD reported higher levels of anger, hostility, and aggression than Veterans without PTSD symptoms (Jakupcak et al., 2007). A recent study by Elbogen, Johnson, Newton et al. (2012) found that, in a multivariate analysis, PTSD was associated with a higher risk of arrest only when accompanied by high levels of anger/irritability (Odds Ratio [OR] = 2.13, p = 0.02). Nonetheless, they found that other factors such as witnessing parents fighting (OR = 4.06, p < 0.001), a history of previous arrests (OR = 2.31, p < 0.01), and substance abuse (OR = 3.37, p < 0.001) were more strongly associated with having been arrested.

Psychiatric disorders: criminogenic risk factors. The general body of research with justice-involved adults has highlighted two psychiatric disorders – ASPD and SUDs – as having a uniquely strong and direct link with recidivism (Andrews & Bonta, 2010b)⁴.

Antisocial personality disorder. Estimates of the prevalence of ASPD in justice-involved populations are much higher than estimates for the general population (up to 49% in justice-involved adults compared to 1-6% in the general population; Black et al., 2010; Temporini, 2010). The prevalence of ASPD is generally lower among justice-involved women than men, with prevalence estimates for justice-involved women ranging from 12-32% (Lewis, 2010). The prevalence of ASPD also tends to be lower for older justice-involved adults compared to the entire justice-involved population (Kakoullis, Le Mesurier, & Kingston, 2010). It is unclear whether this reflects an actual difference in prevalence or is a result of differing samples or measurement. Given that ASPD very often co-occurs with other mental health issues, offenders with ASPD may often require a variety of services (Black et al., 2010). See Table 3.

<u>Veteran-specific research</u>. Although there are no studies directly comparing the prevalence of ASPD among justice-involved Veterans and non-Veterans, estimates in groups of justice-involved Veterans are lower than estimates in justice-involved adults (Erickson et al., 2008; Tsai et al., 2013c). Additional research directly comparing the prevalence of ASPD among justice-involved Veterans and non-Veterans is warranted, as this knowledge may help VA determine the need for treatments targeting criminogenic risk factors discussed in the next section.

To our knowledge, there are no studies assessing ASPD in the subgroups of justice-involved women Veterans, justice-involved older Veterans, and justice-involved OEF/OIF/OND Veterans.

Substance use disorders (SUDs). Like ASPD, SUDs are a major risk factor for recidivism and are common among justice-involved adults. At least half of incarcerated adults without another mental health concern have a SUD, while estimates indicate that at least three-quarters of offenders with a serious psychiatric disorder also have a co-occurring SUD (Abram & Teplin, 1991; Abram, Teplin, & McClelland, 2003; James & Glaze, 2006).

<u>Veteran-specific research.</u> Many justice-involved Veterans have SUDs. According to BJS, 61% of Veterans in state prison and 57% in federal prison met criteria for a SUD (Noonan & Mumola, 2007). Similar rates were found in a small sample of Veteran sex offenders leaving prison (Schaffer, 2011). Compared to non-Veteran prisoners, recent drug use at the time of the offense was lower among Veteran prisoners. The most commonly reported recently used drugs were the same for Veterans and non-Veterans (i.e., marijuana followed by cocaine/crack and stimulants such as methamphetamines). However, Veterans in state prisons and local jails were more likely to have ever used intravenous drugs than non-Veterans. This difference in intravenous drugs was smaller, although in the same direction, among federal

⁴ Although psychopathy has a strong link to recidivism risk (Hemphill, Hare, & Wong, 1998), there is no consistent evidence that receipt of evidence-based treatment lowers risk of recidivism or alters associated personality traits (e.g., Hare, Clark, Grann, & Thornton, 2000). Thus, individuals with psychopathy are likely to benefit more from close monitoring and management than psychotherapy. The Hare Psychopathy Checklist is the most commonly used diagnostic tool to assess psychopathy (Hare, 1999).

prisoners (Mumola, 2000; Noonan & Mumola, 2007; White et al., 2012). Finally, rates of alcohol use disorders did not differ based on Veteran status among state or federal prisoners (Noonan & Mumola, 2007). See Table 4.

To our knowledge, there are no studies assessing the prevalence of SUDs in the subgroups of justiceinvolved women Veterans or justice-involved older Veterans.

OEF/OIF/OND Veterans. According to administrative data based on the clinical impressions of HCRV outreach workers, approximately 43% of OEF/OIF/OND Veterans in prison have an alcohol use disorder, while 37% have a drug use disorder (Tsai et al., 2013c). In multivariate analyses, Elbogen, Johnson, Newton et al. (2012) found that substance misuse tripled the odds of criminal justice involvement after military service in OEF/OIF/OND Veterans.

Co-occurring disorders. As mentioned above, the majority (over 75%) of justice-involved adults who have a serious psychiatric disorder also have a co-occurring SUD or other mental health disorder. This population with co-occurring disorders requires a range of services. Osher (2005) highlighted in particular the close association between co-occurring disorders and homelessness as well as the association between homelessness and incarceration (see the discussion of homelessness below). He also described how the presence of multiple disorders can increase the destabilizing effects of each disorder (e.g., by increasing interpersonal conflict and/or increasing cognitive and behavioral functioning impairment). Interventions for this population will be reviewed later in this report, but it is important to highlight the prevalence of this subgroup of justice-involved adults, given the evidence that mental health or SUD treatment by itself (as opposed to integrated mental health and SUD treatment) has limited positive impact in people with co-occurring disorders (Peters & Osher, 2004).

Veteran-specific research. To our knowledge, there are no studies assessing the prevalence of cooccurring disorders in justice-involved Veterans or in the subgroups of justice-involved women, older, and OEF/OIF/OND Veterans. However, in one study of incarceration among users of VA mental health services from 1994 to 1997, those Veterans with co-occurring disorders had the highest rate of incarceration during the observation period (25%) compared to those with only a SUD (21%) or a mental health concern (11%; Rosenheck, Banks, Pandiani, & Hoff, 2000). Additionally, there is research demonstrating a reduction in justice-involvement for Veterans with co-occurring disorders who receive VHA services (Pandiani, Ochs, & Pomerantz, 2010).

Other treatment needs. In addition to mental health needs, justice-involved Veterans may have further needs related to traumatic brain injury (TBI) and other physical health problems. These health problems can limit the ability and/or willingness of offenders to fully participate in rehabilitation programs. Furthermore, the complex needs of justice-involved Veterans may be closely related to both prior experience and future risk of homelessness. In particular, the reentry period after incarceration is an important point of intervention. Even in cases where adults are receiving treatment while incarcerated, they often do not continue to access care once released. Without treatment, these reentry Veterans with health conditions are more likely to have negative outcomes compared to reentry adults without

any health conditions (e.g., in the areas of housing, employment, family support, and recidivism; Mallik-Kane & Visher, 2008).

Traumatic Brain Injury (TBI). An important consideration when justice-involved adults have a history of violent traumatic experiences is the potential for sequelae related to a TBI. Estimates of the rate of past TBI or head injury among jail and prison inmates range widely (25-87%), but are consistently higher than the estimated prevalence in the general population (9%), possibly related to the prevalence of violent trauma discussed above (Shiroma, Ferguson, & Pickelsimer, 2010). Many inmates report ongoing symptoms from TBI (Ferguson, Pickelsimer, Corrigan, Bogner, & Wald, 2012). The severity of a TBI ranges from mild to severe depending on the type and intensity of the injury event. The majority of TBIs are mild and those who experience them recovery fully (Carroll et al., 2004). However, more serious injuries have been associated with chronic problems in a variety of functional areas, including thinking, memory, sensation, language, and emotion, which can present a challenge for managing justiceinvolved adults while incarcerated and in the community (Centers for Disease Control, n.d.). In some cases, severe TBI can result in problematic behavioral and personality changes, including anger, impulsivity, aggression and violence, especially in the presence of co-occurring mental health issues such as depression and SUDs (Baguley, Cooper, & Felmingham, 2006; Fazel, Philipson, Gardiner, Merritt, & Grann, 2009; National Institute of Neurological Disorders and Stroke, 2002; Tateno, Jorge, & Robinson, 2003). Further, some research has shown an association between TBI and violent offending (Farrer, Frost, & Hedges, 2012; Miller, 1999; Turkstra, Jones, & Toler, 2003). See Table 3.

<u>Veteran-specific research.</u> To our knowledge, there are no studies assessing the prevalence of TBI in justice-involved Veterans or in the subgroups of justice-involved women Veterans, justice-involved older Veterans, and justice-involved OEF/OIF/OND Veterans. Some general relevant research on TBI related to OEF/OIF/OND Veterans is discussed below.

OEF/OIF/OND Veterans. The nature of fighting in recent wars, along with medical and equipment advances leading to increased survival rates among Veterans who sustain combat injuries, has brought the issue of TBI to the forefront as a particular concern for OEF/OIF/OND Veterans (Department of Defense, 2007; Tanielian & Jaycox, 2008; Warden, 2006). An estimated 1 in 5 combat casualties in the recent wars involves a brain injury compared to 1 in 10 during the Vietnam War (Summerall, 2007); although, some of this increase may be accounted for by heightened awareness of TBI and improved diagnostic capabilities (Warden, 2006). It is unclear what the overall prevalence of TBI may be among Veterans generally or among justice-involved Veterans. In one study, Elbogen, Johnson, Newton et al. (2012) found that TBI was not statistically associated with increased odds of criminal arrest among OEF/OIF/OND Veterans. However, given the concern about TBI prevalence in both justice-involved adults and in OEF/OIF/OND Veterans, more research is needed to better understand the prevalence and impact of TBI, and its interaction with co-occurring mental health issues, in justice-involved Veterans.

Physical health needs. Surveys of jail and prison inmates show that approximately one-third of men report at least one current medical problem (Maruschak, 2006, 2008). The most common current medical problems included arthritis, hypertension, asthma, heart problems, tuberculosis (lifetime), and kidney problems. Relatedly, Binswanger et al. (2009) found that jail and prison inmates were

significantly more likely than the general population to suffer from hypertension, asthma, arthritis, cervical cancer and hepatitis, but the prevalence was similar to the general population for diabetes, angina/myocardial infarction and the prevalence was lower for obesity. Additionally, at least onequarter of inmates reported that they had a physical impairment that limited their ability to participate in a variety of activities. See Table 3.

<u>Veteran-specific research</u>. There is little available information about the physical health problems of justice-involved Veterans in particular, but VJP administrative data provides some insight in this area. The data are not based on structured medical diagnostic interviews by physicians; instead, they are conditions that Veterans report they were told they have by doctors or nurses. Over one year of contacts by HCRV and VJO, more than half of Veterans were assessed as being in need of medical treatment. The most prevalent reported conditions were Hepatitis C, heart disease, chronic obstructive pulmonary disease (COPD), and diabetes (Department of Veterans Affairs, 2012b). Interestingly, in a small sample of Veteran sex offenders leaving prison, 78% reported having a medical problem and/or need (Schaffer, 2011). Based on this information, justice-involved Veterans may have more medical needs than other justice-involved adults.

Women Veterans. To our knowledge, there are no studies assessing the physical health needs of justiceinvolved women Veterans specifically; however, physical health problems are more prevalent among women than men in jails and prisons, with over half reporting at least one problem, most commonly arthritis, asthma, and/or hypertension (Maruschak, 2006, 2008). Given that justice-involved Veterans may have more physical health needs than other justice-involved adults, justice-involved women Veterans may have particularly high rates of physical health needs.

Older Veterans. In both jails and prisons, the prevalence of medical problems increased with age (regardless of Veteran status), with 61% of inmates 45 or older reporting at least one current medical problem (compared to 25% of inmates under 25; Maruschak, 2006, 2008). In a subsample of prisoners at least 55 years old and within two years of release, the great majority (80%) reported at least one medical condition (out of 11 chronic conditions). Additionally, one-third considered themselves to have a disability, with no significant differences between Veterans and non-Veterans, except for a higher rate of hearing difficulty among Veterans compared to non-Veterans (26% vs 15%; Williams et al., 2010).

OEF/OIF/OND Veterans. Administrative data from HCRV indicate that 54% of OEF/OIF/OND Veterans in prison reported a serious medical problem (Tsai et al., 2013c).

Homelessness. Homelessness is a significant concern for justice-involved adults generally, due to its bidirectional relationship with justice involvement, such that justice-involved adults often have a history of homelessness and homeless adults often have a history of justice-involvement (Greenberg & Rosenheck, 2008; McGuire & Rosenheck, 2004; Metraux, Caterina, & Cho, 2007). Metraux et al. (2007) found wide variation in estimates of the prevalence of a recent history of homelessness among justiceinvolved adults, with higher estimates among prison inmates and those with a psychiatric disorder. The estimates generally range from approximately 10% to 30%, with a prevalence of 82% in one sample of repeat jail inmates. Likewise, Metraux et al. (2007) estimated that at least 20% of homeless single adults have a history of incarceration. There is significant overlap in demographic characteristics of incarcerated and homeless adults (e.g., both are likely to be male, young, a minority, poor, undereducated, and often with mental health and/or substance abuse problems; Metraux et al., 2007). As a result of this intertwined risk, reentry programs that aim to break the cycle of homelessness and incarceration have received some attention in the literature (Roman & Travis, 2004). An extensive review of interventions specifically focused on homelessness is beyond the scope of this review, but given the importance of mental health and substance abuse problems as risk factors for homelessness, much of the research reviewed later in this report may be applicable to this population.

Veteran-specific research. Veterans have long been at higher risk for homelessness than other adults (Gamache, Rosenheck, & Tessler, 2001), and ending Veteran homelessness has been highlighted as a VA priority, particularly among justice-involved Veterans (McGuire, 2007) given the association between homelessness and justice-involvement in Veterans (Benda, Rodell, & Rodell, 2003; Copeland et al., 2009). According to administrative data from HCRV, 30% of Veterans in prison reported some history of homelessness, with 11% classified as chronically homeless (Tsai, Rosenheck, Kasprow, & McGuire, 2013a). A systematic review conducted by VA's Evidence-based Synthesis Program concluded that justice-involved Veterans have similar homelessness risk factors as other justice-involved adults and other homeless adults, although they may have had a specific, military-influenced pathway to acquiring some of the risk factors (Balshem, Christensen, Tuepker, & Kansagara, 2011). Additionally, the reviewers found some evidence that factors considered protective in non-Veterans (e.g., education, early family cohesion, and marriage), may not provide the same benefits in terms of limiting the risk of homelessness among Veterans.

The VA Homeless Veterans Initiative, part of the federal government goal to end Veteran homelessness by 2015, includes a variety of services to target and prevent homelessness and assist Veterans who are currently homeless (Department of Veterans Affairs, 2012a). These services include Housing Choice Vouchers through the US Department of Housing and Urban Development-Veterans Affairs Support Housing program (HUD-VASH), supported employment, and case management, as well as VA treatment services for medical and/or mental health needs. Recent research has demonstrated benefits of programs to support employment of Veterans with mental health issues, including those who are justice-involved. One study with formerly justice-involved Veterans with a psychiatric diagnosis showed promise for a structured VA program to develop skills to become employed (LePage, Washington, Lewis, Johnson, & Garcia-Rea, 2011).

To our knowledge, there are no studies assessing the prevalence of homelessness among the subgroup of justice-involved women Veterans.

Older Veterans. In a sample of prisoners who were at least 55 years old and within two years of release, 11% of Veterans reported at least one risk factor for homelessness (i.e., homeless at time of arrest, homeless within the year before arrest, and/or marginally housed at the time of arrest) compared to 8% of non-Veterans (Williams et al., 2010).

OEF/OIF/OND Veterans. Administrative data from HCRV indicate that 23% of OEF/OIF/OND Veterans in prison reported being currently homeless or having a history or homelessness (Tsai et al., 2013c).

Summary of Key Question #1. Many justice-involved Veterans have mental health needs that may impact their reentry into the community after incarceration. More than half of justice-involved Veterans have at least one mental health concern, including psychiatric disorders such as mood, substance use, or anxiety disorders. A large number of justice-involved Veterans have had at least one lifetime traumatic experience, with one study reporting past trauma in 87% of Veterans incarcerated in jails. These past traumatic experiences include non-military trauma (e.g., childhood abuse, assault) and military trauma (e.g., combat trauma, military sexual trauma). Justice-involved Veterans may be dealing with ongoing mental health issues as a result; one study found that 39% of Veterans incarcerated in jails screened positive for PTSD.

The subgroup of justice-involved Veterans with combat experience is more likely than other justiceinvolved Veterans to suffer from PTSD. The combination of combat trauma and PTSD may have a particularly strong link to antisocial behavior such as IPV. The general body of research with justiceinvolved adults has highlighted two psychiatric disorders – ASPD and SUDs – as having a uniquely strong and direct link with recidivism. Additionally, SUDs are a concern for nearly two-thirds of justice-involved Veterans (57% in federal prisons and 61% in state prisons), including a large proportion of individuals (over 75%) who have a co-occurring psychiatric disorder. Furthermore, though the actual prevalence is unclear, it is likely that a substantial number of justice-involved Veterans have a history of traumatic brain injury. Most justice-involved Veterans also report a need for medical treatment, with a quarter struggling with chronic pain. Justice-involved older Veterans are particularly likely to need medical treatment and to self-report a disability. Finally, the combination of concerns outlined here puts many justice-involved Veterans at an increased risk of homelessness.

Key Question #2: What Are the Main Assessment Tools to Identify the Treatment Needs and Recidivism Risk Level in Justice-Involved Veterans?

Assessment plays a key role in determining the treatment needs of justice-involved adults, including the nature, optimum intensity, and setting of interventions. In general, treatment should be tailored to the needs of each justice-involved Veteran, including targeting appropriate interventions for those at a moderate to high risk of recidivism. Drawing from an extensive literature, we will outline relevant assessments and identify specific treatment targets that should be taken into account to provide comprehensive care that result in the greatest likelihood of positive outcomes across multiple domains.

Mental health assessment. There are a number of mental health assessments that address mental health concerns in general, and some of these tools have been examined for validity in justice-involved populations. As with most assessments, it is important to integrate self-report and interview assessment strategies to optimize the validity and reliability of information obtained. In certain settings, the use of brief screening instruments is more feasible, whereas some settings are more amenable to the use of more comprehensive assessments. Thus, we will discuss brief mental health screening instruments as well as more in-depth assessments.

In a 2008 report published by SAMHSA's GAINS Center, Peters et al. reviewed available options for screening and assessment of co-occurring disorders in justice-involved adults. They reviewed screening and assessment tools for both mental health issues and SUDs, and assessed the evidence of their usefulness with justice-involved populations. To screen for co-occurring disorders, Peters et al. (2008) recommended screening for mental health issues using either the Global Appraisal of Individual Needs (GAIN-SS; Dennis, Titus, White, Unsicker, & Hodgkins, 2008) or the Mental Health Screening Form-III (MHSF-III; Carroll & McGinley, 2001), and screening for substance abuse problems using either the Simple Screening Instrument (SSI; Winters & Zenilman, 1994) or the Texas Christian University Drug Screen-II (TCUDS-II; Simpson & Knight, 2012). For a fuller assessment of co-occurring disorders, the authors recommend using the Psychiatric Research Interview for Substance and Mental Disorders (PRISM; Hasin et al., 1996) to assess both psychiatric disorders and SUDs. If separately assessing for psychiatric disorders and for SUDs, however, they recommend using the Minnesota Multiphasic Personality Inventory-2 (MMPI-2; Butcher, Dahlstrom, Graham, Tellegen, & Kaemmer, 1989), the Millon Clinical Multiaxial Inventory-III (MCMI-III; Millon, 1983), or the Personality Assessment Inventory (PAI; Morey, 1991), combined with the Addiction Severity Index – Fifth Version (ASI-V5; McLellan et al., 1992). Further information about these tools is presented in Table 5.

Table 5 also describes three additional screening tools: one was developed by the World Health Organization and two were developed for the National Institute of Justice (NIJ) specifically for use with justice-involved adults. The former, endorsed by the National Institute on Drug Abuse, is the Alcohol, Smoking and Substance Involvement Screening Test (ASSIST; Humeniuk et al., 2008; National Institute on Drug Abuse, n.d.). The NIJ assessment tools are the Correctional Mental Health Screen (CMHS) and the Brief Jail Mental Health Screen (BJMHS; Ford et al., 2007). Importantly, the CMHS was specifically developed and validated with justice-involved men and women, resulting in gender-specific versions of the tool, including the first screening tool designed intentionally for justice-involved women (Temporini, 2010). Though the BJMHS was initially found to have limited validity with justice-involved women (Steadman, Scott, Osher, Agnese, & Robbins, 2005), subsequent research refuted this and found the BJMHS to be valid with justice-involved women as well as men (Steadman, Robbins, Islam, & Osher, 2007).

Finally, acknowledging the importance of past trauma experience and PTSD among justice-involved adults, Peters et al. (2008) recommended screening for these issues along with the screening for co-occurring disorders discussed above. Though the authors did not make specific recommendations in this area, they noted that trauma issues are examined in the PAI and highlighted three further trauma-specific tools. These include the Impact of Events Scale-Revised (IES-R; Horowitz, Wilner, & Alvarez, 1979; Weiss & Marmar, 1996), the Trauma Symptom Inventory (TSI; Briere, 1995), and the Clinician-Administered PTSD Scale for DSM-IV (CAPS; Blake et al., 1998). One additional screening tool of note is the PTSD Checklist (PCL; Weathers, Litz, Herman, Huska, & Keane, 1993), which is used by VA to screen for PTSD. Assessments for different types of trauma may be particularly important for matching justice-involved Veterans to appropriate treatment.

Veteran-specific research. To our knowledge, there are no studies examining the use of mental health assessment tools with justice-involved Veterans or among the subgroups of justice-involved women, older, or OEF/OIF/OND Veterans.

Recidivism risk assessment. In addition to assessing a person's mental health needs, assessing an individual's risk of recidivism provides critical information. Recidivism may be defined in a variety of ways, e.g., re-arrest, re-conviction, re-sentencing to prison for a new crime, or re-incarceration (including for technical probation/parole violations) over a specified period of time (Langan & Levin, 2002). Reviews and general literature may combine studies using various types of recidivism, often selecting the most broad measure available in each study (e.g., Aos, Miller, & Drake, 2006; Landenberger & Lipsey, 2005). Though there are concerns about the general lack of attention paid to how different measures of recidivism (and consequently outcomes of research) may be affected by "extra-program" elements such as "political pressures or even the idiosyncrasies of supervising agents" (Maxwell, 2005, p. 520), recidivism, by any measure, is associated with costs ranging from victim costs (e.g., medical expenses, lost property) to court, incarceration, and treatment costs (Drake, Aos, & Miller, 2009). Additionally, while Veterans are incarcerated, they are ineligible for VA healthcare services, as VA guidelines prohibit care for individuals while they are in institutions that have a statutory requirement to provide that care to them (Medical benefits package, 2011). Recidivism can thus limit the ability of VA to provide continuous care for mental health and other issues. While they remain in the community, and on release from prison or jail, Veterans can access services provided by VA that can assist them with mental health, SUD, and psychosocial adjustment issues, all of which may contribute to positive outcomes, including reductions in recidivism. Careful assessment to identify those justice-involved Veterans who are likely to recidivate can allow service providers to target certain resources to this group specifically.

Criminogenic risk overview. Andrews and Bonta (2010b) have compiled the risk factors most consistently shown to be associated with recidivism into a list of the "Central Eight" areas of need related to criminogenic risk factors. As mentioned in Key Question #1, the presence of mental health issues does not alone predict risk for recidivism. Rather, it is the additional presence of criminogenic risk factors that shows the strongest link (Skeem, Manchak, & Peterson, 2011). Some research has found that rates of criminogenic risk factors are higher among justice-involved adults with mental health concerns than among justice-involved adults without such issues (Girard & Wormith, 2004; Skeem, Nicholson, & Kregg, 2008), though other research did not identify differences in criminal thinking based on mental health concerns (Morgan, Fisher, Duan, Mandracchia, & Murray, 2010). Thus, assessment of key criminogenic risk factors, rather than focusing solely on mental illness, appears to play an important role in predicting recidivism.

The Central Eight criminogenic risk factors are split up into the "Big Four" (those risk factors with the strongest association with recidivism), and the "Moderate Four" (those risk factors that are significantly, but less strongly, associated with recidivism; Andrews, Bonta, & Wormith, 2006).

The risk factors most strongly associated with recidivism (The Big Four) are 1) *a history of antisocial behavior* (based on the frequency and variety of offenses), 2) an *antisocial personality pattern* (e.g.,

impulsivity, poor anger management skills), 3) *antisocial cognition* (e.g., a criminal identity, rationalization of crime), and 4) *antisocial associates* (e.g., close relationships consisting mainly of people who provide social support for crime). These risk factors are closely related to each other but their subtle distinctions represent separate factors that may warrant somewhat different interventions or treatment elements. For example, interventions for an antisocial personality pattern would focus largely on building behavioral skills such as problem solving, anger management and self-control, while interventions for antisocial cognition would focus more on building a positive prosocial personal identity and developing an understanding of how crime impacts victims. Further specific interventions may target antisocial associates by encouraging participation in prosocial activities in order to increase the number of positive associates (Andrews et al., 2012).

Other risk factors (The Moderate Four) that are significantly, but less strongly, associated with recidivism are 5) negative *family/marital circumstances*, 6) lack of positive *school/work involvement*, 7) lack of involvement in anti-criminal *leisure/recreation activities*, and 8) *substance abuse*.

A significant amount of criticism of the research on criminogenic risk factors has involved the question of the applicability of the findings to justice-involved women (e.g., Hannah-Moffat, 2009; Hollin & Palmer, 2006; Morash, Bynum, & Koons, 1998; Van Voorhis, Wright, Salisbury, & Bauman, 2010). The list of the Central Eight criminogenic risk factors was based predominantly on research with men. Several researchers have criticized that these methods are conducive to overlooking possible women-specific criminogenic risk factors and/or focusing on men-specific factors that may not apply to justice-involved women (Hannah-Moffat, 2009; Hollin & Palmer, 2006). However, a recent meta-analysis found the Central Eight criminogenic risk factors were effective at predicting recidivism among justice-involved women (Smith, Cullen, & Latessa, 2009). Nonetheless, it may be that particular antisocial attitudes are less prevalent among justice-involved women (e.g., ASPD rates are generally lower among justiceinvolved women than men) but other risk factors are more important for women. For example, Andrews et al. (2012) found general support for the Central Eight risk factors among justice-involved women, but they highlighted SUDs as being a particularly strong risk factor for women.

Homelessness. Though not identified in the literature as a general criminogenic risk factor, researchers have highlighted a small group of adults who come into frequent contact with the justice system, most often for minor offenses, who are also often homeless (Fitzpatrick & Myrstol, 2011; Ford, 2005). For example, one small sample of 19 jail inmates judged by staff to be "frequent fliers" had a mean of 98 previous charges, 90% of which were misdemeanors, often property and public order offenses directly related to being homeless (Ford, 2005). Homelessness has also been linked to violent behavior in civilians (Swanson et al., 2002) and Veterans (Elbogen, Beckham, Butterfield, Swartz, & Swanson, 2008) with mental health diagnoses. Homeless jail inmates are likely to have some needs related to criminogenic risk factors, such as SUDs, as well as other serious needs related to mental illness (Fitzpatrick & Myrstol, 2011; McNiel, Binder, & Robinson, 2005). Additionally, justice-involved homeless Veterans may require extra efforts to link them to needed services. One study found that homeless jail-incarcerated Veterans were less likely to access VA psychiatric and SUD services than other homeless Veterans, even when both groups received outreach services from VA specialists (McGuire, Rosenheck, & Kasprow, 2003).

<u>Veteran-specific research.</u> There is some evidence that the criminogenic risk factors for many justiceinvolved Veterans parallel criminogenic risk factors of other justice-involved adults. Several studies have found that a history of antisocial behavior (including a diagnosis of ASPD) and substance abuse are strong predictors of justice-involvement among Veterans (Black et al., 2005; Erickson et al., 2008; Shaw, Churchill, Noyes, & Loeffelholz, 1987). In accordance with the research above, other psychiatric diagnoses, such as PTSD and schizophrenia, have not been consistently identified as criminogenic risk factors in Veterans (Erickson et al., 2008; Shaw et al., 1987). Nonetheless, and as discussed in Key Question #1, there may be an important subgroup of justice-involved Veterans for which combatrelated PTSD is a significant additional criminogenic risk factor (Byrne & Riggs, 1996; Greenberg & Rosenheck, 2009; Jordan et al., 1992; Savarese et al., 2001).

To our knowledge, there are no studies examining specific criminogenic risk factors among the subgroups of justice-involved women Veterans, justice-involved older Veterans, or justice-involved OEF/OIF/OND Veterans.

Criminogenic risk assessment tools. The most extensively developed assessment tools incorporate elements of criminogenic risk with other information necessary for designing appropriate treatment plans (Andrews et al., 2006). In general, they assess historical risk factors (i.e., the rate and variety of previous offending) along with dynamic criminogenic risk factors (i.e., possible specific targets for treatments to reduce recidivism). These assessments also identify other individual characteristics that may influence the type of treatment provided, such as gender, motivation level, personality characteristics, and mental health treatment needs. Finally, they may include a case management component, where treatment goals and interventions can be specified and tracked. Table 6 provides an overview of several specific assessment tools, including The Correctional Assessment and Intervention System (CAIS; National Council on Crime & Delinquency, n.d.), Correctional Offender Management Profiling for Alternative Sanctions (COMPAS; Northpointe, n.d.), The Offender Intake Assessment (OIA; Motiuk, 1997), The Level of Service/Case Management Inventory (LS/CMI; Andrews, Bonta, & Wormith, 2004), and the Ohio Risk Assessment System (ORAS; Latessa, Lemke, Makarios, Smith, & Lowenkamp, 2010).

The risk assessments in the tools above are strongest when predicting general recidivism, though they have also been shown to be useful in predicting violent and sexual recidivism (Andrews et al., 2006). Nonetheless, additional tools have been developed that specifically aim to assess the particular risk factors for violent and sexual offenders. These include The Violence Risk Assessment Guide (VRAG) for violent recidivism (Harris, Rice, & Quinsey, 1993) and the Static-2002R for sexual recidivism (Hanson & Thornton, 2003), both of which incorporate scores from Hare's Psychopathy Checklist-Revised (PCL-R; Hare, 1999). While the VRAG is effective at predicting the risk of violent recidivism, it does not highlight specific criminogenic risk factors that may be targets for treatments, and so it may be most useful for treatment planning when it is paired with one of the more extensive assessments discussed above (Andrews et al., 2006).

While these assessment tools are useful in terms of providing standardized, objective, and evidenceinformed information that may guide treatment planning, they do not preclude the use of professional judgment (Sreenivasan, Kirkish, Garrick, Weinberger, & Phenix, 2000). Though specific criminogenic risk factors have been shown to be associated with recidivism in justice-involved adults generally, some authors have cautioned that this does not necessarily mean that the presence of the risk factor in an individual is indicative of a direct link between that factor and the individual's offending. Consequently, it is important for clinicians to understand the larger context of an individual's situation in order to assess which identified risk factors should be the main targets for intervention and if there are additional risk factors that may have a direct impact on recidivism (Baird, 2009).

One further consideration is that resource limitations may not make it possible to administer a detailed risk assessment to every individual. In some cases, brief clinical interview and/or assessment may be sufficient to assess level of risk and determine whether further assessment, potentially of criminogenic risk factors, is necessary. To this end, researchers from Vera's Substance Use and Mental Health Program developed a tool to prioritize attention and services using administrative data from New York City jails (Wei & Parsons, 2012). The researchers were able to develop a 4-factor tool, using only information available in the Inmate Information System (i.e., admission age, current charge, number of prior jail admissions, and recent jail admissions), to classify jail detainees as having a low, moderate, high, or very high service priority level. Just 24% of those classified as having a low service priority level were re-admitted to jail within one year, while 84% of those classified as having a very high service priority were re-admitted. This study showed promise for the use of administrative data (and/or basic screening questions) to focus limited time and resources for more extensive assessment of needs on those most likely to benefit from such assessment and services related to criminogenic risk factors.

Veteran-specific research. To our knowledge, there are no studies examining the use of criminogenic risk assessment tools with justice-involved Veterans or among the subgroups of justice-involved women, older, or OEF/OIF/OND Veterans. However, a review of the literature on risk assessment yielded a checklist of factors demonstrating consistent empirical relationships to violent behavior in Veterans (including younger age, history of arrests/violence, history of child maltreatment, high combat exposure, PTSD, substance abuse, depression, and financial troubles) and provides clinicians with an evidence-based approach to making decisions in the absence of currently validated risk assessment tools (Elbogen et al., 2010).

Summary of Key Question #2. As a supplement to clinical interview, objective assessment tools can provide information that is important for linking justice-involved Veterans to appropriate treatment. There are many options for screening and assessment that vary in administration and interpretation time. Thus, it is important to rely on clinical judgment to determine how to prioritize and integrate objective assessment tools. An initial screen for co-occurring psychiatric disorders could be done with the Global Appraisal of Individual Needs (GAIN) combined with the Simple Screening Instrument (SSI). For individuals requiring more detailed assessment, this could be followed by use of the Psychiatric Research Interview for Substance and Mental Disorders (PRISM). Additionally, the Impact of Events Scale-Revised (IES-R) or the PTSD Checklist (PCL) could be used to identify justice-involved Veterans who are experiencing distress associated with exposure to a traumatic event. In many settings, the brief PCL, already widely used in VA, may be the most feasible to identify those for follow-up assessment. Other assessment tools have been developed to assess the level of risk of recidivism in justice-involved adults.

These include the Level of Service/Case Management Inventory (LS/CMI) and the Correctional Offender Management Profiling for Alternative Sanctions (COMPAS) assessments, which can be used to focus appropriate resources to justice-involved Veterans who are at high risk of recidivism and are most likely to benefit from such additional attention.

Key Question #3: What Are the Evidence-Based or Promising Psychosocial Treatments for Justice-Involved Veterans with Mental Health Treatment Needs?

General mental health treatment. The following section will focus on evidence-based, psychosocial interventions that impact mental illness; however, it is important to acknowledge that psychotropic medication as a primary treatment or in conjunction with psychosocial interventions also have a strong evidence base for several mental health conditions. Given the breadth and depth of the literature on psychotropic medications, a review of their effectiveness is beyond the scope of this report.

A report published by SAMHSA's GAINS Center provides a list of evidence-based and promising practices and programs for mental health issues in the general population that *may* be applicable to justice-involved adults with mental health concerns (Blandford & Osher, 2012, p. 4). The evidence-based and promising *practices* describe general skills and techniques that can be adapted and combined for particular circumstances. On the other hand, the evidence-based and promising *programs* are structured, guided sets of practices that have been shown to be particularly effective in combination (Blandford & Osher, 2012). See Table 7 for a list of the practices and programs along with a brief description of each. The table includes treatments such as Assertive Community Treatment (ACT) and psychopharmacology as well as more general practices such as CBT and Motivational Interviewing.

To date, the body of studies examining treatments targeting mental health needs of justice-involved adults does not point conclusively to an extensive evidence-base for any of the specific interventions mentioned in Table 7. However, the research does show that treatment in general can have positive outcomes. Two recent meta-analyses of interventions for justice-involved adults with mental disorders found that the identified treatments successfully reduced symptoms and improved participants' functioning (Martin, Dorken, Wamboldt, & Wootten, 2012; Morgan et al., 2012). The included treatments ranged from medication-only to integrated treatments including medication, psychoeducation, and psychosocial treatments. One of the reviews (Morgan et al., 2012) found a large positive effect of treatment on general mental health symptoms across 14 studies (Cohen's d = 0.86). The other review (Martin et al., 2012) included only studies with a comparison group and found smaller positive effects of treatment on mental health symptoms (d = 0.12 across 12 studies) and positive effects of treatment on mental health functioning (d = 0.20 across 5 studies).

Unfortunately, the heterogeneity of the samples and low rigor in design of studies in both reviews did not allow for conclusions to be made about which kinds of treatment may be more or less likely to benefit justice-involved adults, or about how the treatments may benefit justice-involved Veterans. However, one of the reviews (Morgan et al., 2012) showed potentially promising results for an open admission policy that allows new participants to join treatment groups on a rolling basis as well as for treatments that included homework assignments. Additionally, both reviews found that reductions in recidivism were larger in the few interventions that integrated psychiatric treatment with elements aimed specifically at additional criminogenic risk factors such as antisocial thinking, albeit effect sizes were small (Martin et al., 2012; Morgan et al., 2012). Such integrated treatments will be discussed further in the next section of this report. Finally, in one meta-analysis focused specifically on the psychological well-being of incarcerated women, Tripodi et al. (2011) found moderately positive outcomes (e.g., lower levels of anxiety and depression) across 16 studies. The largest effects across all mental health outcomes were found in individual studies of CBT (including large effects for improved self-reference, reduced depression, and decreased dissociation episodes), group trauma therapy (including large effects for reduced hostility, paranoid ideation, and phobic anxiety), and psychoeducation (including large effects for reduced depression and trauma symptoms).

Treatment for trauma and PTSD. As highlighted in the first part of the report, there is an interrelationship between mental health issues, previous trauma experience and justice-involvement. As such, authors have emphasized that all treatment provided to justice-involved adults should be traumainformed (Morrissey et al., 2005; Wallace, Conner, & Dass-Brailsford, 2011; Wolff & Shi, 2010). This includes ensuring that treatment providers have sufficient training around trauma-related issues, as well as ensuring that all mental health treatments have the flexibility to integrate trauma-focused components when appropriate (Wallace et al., 2011). There has been little research examining such trauma-informed treatments in justice-involved adults, but one study did specifically examine this issue. Morrissey et al. (2005) evaluated the impact of several models of trauma-informed care for women with co-occurring disorders and a history of violence. They compared 9 community sites providing manualbased, integrated, trauma-informed care to matched sites in each region providing usual care. The integrated treatments were associated with significant improvements in mental health and trauma outcomes (e.g., reduced PTSD symptoms), though the results were more mixed for SUD outcomes. More research is needed to identify the specific elements that distinguish the most successful traumainformed treatment models (Morrissey et al., 2005). Though these results show promise for traumainformed treatment for women, it is not clear how the findings might apply to men and, in particular, to men Veterans.

One group of researchers has been examining adaptations of trauma-informed treatment for men. Three of the 9 sites examined by Morrissey et al. (2005), discussed above, used the Trauma Recovery and Empowerment Model (TREM; Fallot & Harris, 2002). Though the above study only examined TREM as provided to women, the developers have also created a version adapted for men (M-TREM; Fallot et al., 2001). The developers argue that gender-specific groups are particularly important because of the differences in types and characteristics of trauma experienced by men compared to women. They argue that there are differences in trauma attributions, coping styles, sequelae, and the way trauma is experienced and interpreted as a result of cultural gender-role expectations (Fallot, 2007). A study of M-TREM is ongoing, and results have not yet been published (Community Connections, 2008).

Veteran-specific research. At least one program aiming to treat PTSD among Vietnam Veterans in prison has been developed (Sigafoos, 1994). The program involved group treatment to develop coping skills related to the prison environment and to social situations more generally. Participants also received individual treatment based on their particular needs. Finally, participants watched a series of videos of

the Vietnam conflict and contributed to a discussion about their reactions (Sigafoos, 1994). Though preliminary results were promising, to our knowledge a full evaluation of the program has not been published.

Notably, the success of certain VA treatments for PTSD, such as Prolonged Exposure (PE) therapy and Cognitive Processing Therapy (CPT; Keane, Fairbank, Caddell, & Zimering, 1989; Monson et al., 2006), led them to be implemented on a national scale (Department of Veterans Affairs and Department of Defense, 2010). Prolonged exposure includes elements of imaginal or narrative exposure and in-vivo exposure, whereas CPT combines exposure therapy with additional cognitive therapy (Department of Veterans Affairs and Department of Defense, 2010). Although these treatments have not been specifically tested in justice-involved Veterans, there is no indication that these treatments would be less effective. Of note, one recent study showed that, among OEF/OIF Veterans with PTSD, only those who reported high levels of anger and irritability were more likely than other Veterans to have criminal justice involvement, suggesting that anger and irritability may be an important component to target in mental health treatment of justice-involved veterans with PTSD (Elbogen, Johnson, Newton et al., 2012).

To our knowledge, there are no studies assessing mental health treatments in the subgroups of justice-involved women Veterans, justice-involved older Veterans, or justice-involved OEF/OIF/OND Veterans.

Summary of Key Question #3. Though specific evidence with justice-involved adults is limited, there are promising options for treatment of mental health concerns in justice-involved Veterans. For example, treatments such as Assertive Community Treatment are recommended, as are treatments informed primarily by CBT or Motivational Interviewing. Additionally, research with justice-involved women has shown promise for trauma-informed systems of care such as the Trauma Recovery and Empowerment Model, and there is ongoing research to adapt these findings and apply them to justice-involved men. Psychotherapy specifically recommended for individuals with PTSD, such as Prolonged Exposure Therapy and Cognitive Processing Therapy, are also likely to benefit justice-involved Veterans with PTSD.

Key Question #4: What Are the Evidence-Based or Promising Psychosocial Treatments for Justice-Involved Veterans at a High Risk of Recidivism?

Overview of recidivism research findings. As discussed previously, an important concern for justiceinvolved adults is offender recidivism. At a minimum, convicted offenders are typically assigned sanctions, such as a period of incarceration or community supervision, in line with the seriousness of individual crimes. Available research indicates that sanctions alone do not reduce recidivism, and in some cases they may even increase the likelihood of re-offending (Paparozzi and Gendreau, 2005; Smith, Gendreau, and Goggin, 2002; Wilson, MacKenzie, and Mitchell, 2005). Consequently, additional or alternative interventions may be offered with the expressed purpose of reducing the chances of reoffending, benefitting both prospective crime victims in the community as well as lowering the fiscal costs associated with future court cases and sanctioning (Lee et al., 2012). Although these treatments are typically evaluated on recidivism outcomes, they may have additional benefits both in terms of clinical outcomes and general social adjustment. Some examples of these other benefits will be discussed further in a review of individual outcome studies later in the report. Many interventions aiming to reduce recidivism have been tested, with widely varying results (Lipsey & Cullen, 2007). The research on treatments to reduce recidivism has aided in the development of a theoretical model that provides guidance to those aiming specifically to reduce recidivism in justiceinvolved adults. The risk-need-responsivity (RNR) model is focused on identifying and treating risk factors that are related to high rates of recidivism. This model has a great deal of empirical support, and the evidence suggests that targeting specific, changeable deficits and antisocial cognitions through interventions can successfully reduce recidivism in justice-involved men as well as women (Andrews & Bonta, 2010b; Dowden & Andrews, 1999, 2000; Lipsey & Cullen, 2007). Interventions that have the most evidence for reducing recidivism adhere to the three core principles of risk, need, and responsivity, and they are provided with attention to program integrity, including deliberate selection of skilled staff, provision of appropriate training, ongoing supervision, treatment monitoring, and the use of a treatment manual (Andrews & Bonta, 2010b; Andrews & Dowden, 2005). Using a database that included 374 tests of interventions for justice-involved adults, Andrews and Bonta (2010b) demonstrated the additive benefit of adhering to the three core principles. In 60 tests of treatments adhering to all three principles, participants in the treatment groups had a mean recidivism rate 27% lower than those in comparison groups. This difference was 18% across 84 tests of treatments adhering to two of the core principles and 2% across 106 tests of treatments adhering to only one core principle. Across 124 tests of treatments adhering to none of the core principles, the recidivism rate for participants in the treatment conditions was 2% higher than those in comparison conditions.

Risk. According to the risk principle, resources and intensive treatment should be targeted to the population of justice-involved adults who are at moderate or high risk of recidivism, while contact with low-risk offenders should be limited. Several studies have shown support for the risk principle, such that researchers found better effects for higher-intensity treatments when they were targeted at moderate-and high-risk offenders (Andrews & Dowden, 2006; Lowenkamp, Latessa, & Holsinger, 2006; Marlowe, 2003). Lowenkamp and Latessa (2004) noted several ways in which high-intensity interventions may in some cases raise the risk level of low-risk offenders who are exposed to them:

- Low-risk offenders may increase their number of close antisocial associates through regular contact with high-risk offenders also in the program.
- Such programs can disrupt the prosocial elements present in low-risk offenders, such as job stability and positive family and friendship networks.
- Some low-risk offenders who have a low level of intellectual functioning may be at particular risk of being influenced and manipulated by high-risk offenders.

In one example of the evidence for the risk principle, a series of studies in drug courts found an interaction effect of risk level and intensity of intervention (*p*<0.05; Festinger et al., 2002). Higher risk offenders were first defined as people with a SUD in addition to either a diagnosis of ASPD or a history of prior drug treatment. Higher risk offenders had better outcomes when they were assigned to biweekly status hearings in court rather than hearings "as needed" (i.e., as the result of serious

infractions). On the other hand, lower risk participants did better when assigned to "as needed" hearings rather than biweekly hearings (Festinger et al., 2002).

Need. According to the need principle, standardized assessments (such as those discussed in Key Question #2) should be used to identify a set of specific treatment needs for each justice-involved adult based on the Central Eight criminogenic risk factors. Those moderate and high risk offenders toward whom resources should be directed are likely to have multiple criminogenic risk factors that have been flagged as promising treatment targets (in addition to other treatment needs previously discussed, such as mental health issues). Ideal treatments integrate multiple criminogenic targets and have a greater focus on criminogenic needs than on noncriminogenic needs (Andrews et al., 2006; Dowden & Andrews, 2000; Hanson, Bourgon, Helmus, & Hodgson, 2009).

Table 8, reproduced from a report by the Washington State Institute for Public Policy, presents the estimated percentage change in recidivism rates for various types of treatment for justice-involved adults (Aos et al., 2006). While the treatments are not organized directly based on criminogenic risk factors, they provide some clear support that targeting those risk factors can have an impact. As will be discussed in greater detail later in the report, CBT programs for the general offender population and for sex offenders were successful in reducing recidivism. These programs generally target antisocial attitudes and behaviors. Furthermore, effectiveness was demonstrated for drug treatments and employment/vocational training interventions, which also target stated criminogenic risk factors. On the other hand, intensive supervision and boot camps did not have any impact, except when provided along with additional treatment which likely targeted criminogenic risk factors (Aos et al., 2006).

Many of the reductions in recidivism, though statistically significant, may seem small (e.g., in the 5-15% range). The authors highlighted that "even relatively small reductions in recidivism rates can be quite cost-beneficial" when costs of imprisonment and costs to crime victims are taken into account (Aos et al., 2006, p. 4).

Responsivity. The third overarching principle, responsivity, dictates that interventions should target the specific treatment needs identified by the risk assessment. In this model, interventions in accordance with "general responsivity" are focused on cognitive-behavioral or cognitive social learning treatments. Beyond general responsivity, treatments may also benefit from attention to "specific responsivity." This refers to treatment adaptations that tailor the treatment to specific individual characteristics. Characteristics that have been proposed as possible areas of specific responsivity include learning style, intellectual ability, motivation, level of anxiety, gender/race/ethnicity, and individual strengths (Andrews et al., 2006; Aos et al., 2006).

While much of the evidence cited above (and further discussed in the next section) has provided support for the principle of general responsivity, there is a dearth of intervention research in the area of specific responsivity. One element of specific responsivity that is likely to be particularly important is motivation, and techniques such as Motivational Interviewing (MI) could address this component (Miller & Rollnick, 1991; Prochaska & Norcross, 2001). Studies have demonstrated positive effects of MI in justice-involved adults in general (McMurran, 2009) as well as justice-involved Veterans in particular

(Davis, Baer, Saxon, & Kivlahan, 2003). A more detailed discussion of issues related to motivation follows later in the report.

A further important area of specific responsivity may be related to the particular needs of justiceinvolved women. Such gender-informed treatment programs could take into account issues that may be especially salient to women (e.g., a history of trauma, parenting concerns) or treatment preferences that may be prevalent among women (e.g., personal relationship-oriented treatment) to attract women to treatment programs and to help them mentally engage in elements of treatment aimed at criminogenic risk factors (Morash et al., 1998).

The next sections will present more specific information about interventions that are in line with the RNR principles and that have demonstrated effectiveness in reducing the rate of recidivism among justice-involved adults.

Veteran-specific research. To our knowledge, there are no studies examining the applicability of the RNR model to reduce recidivism among justice-involved Veterans or among the subgroups of justice-involved women Veterans, justice-involved older Veterans, or justice-involved OEF/OIF/OND Veterans.

Cognitive-behavioral therapy for criminogenic risk factors. The most extensively developed and tested treatments that fall broadly in line with the RNR model are cognitive-behavioral therapies (CBTs) that aim to change criminogenic thought patterns (Landenberger & Lipsey, 2005; Lipsey & Cullen, 2007; Milkman & Wanberg, 2007). As specified in the name, CBT targets both thoughts (cognitive) and actions (behavioral). In the case of justice-involved adults, such treatments generally aim to change antisocial thought patterns that support criminal actions and to replace such thoughts with prosocial attitudes that support positive activities. Participants examine the positive and negative consequences of their behavior and focus on identifying and carrying out noncriminal behaviors that have positive consequences. Specific skills training treatments aim to build skills to cope with stress, anger, and social situations in a positive way (Milkman & Wanberg, 2007).

In a meta-analysis examining the efficacy of CBT, Aos et al. (2001) included 25 varied studies of CBT interventions provided to the general offenders population, excluding treatments exclusively for sex offenders. These researchers estimated an 8.2% reduction in recidivism for CBT program participants compared to treatment as usual. With an updated sample of 38 studies, these researchers (Lee et al., 2012) conducted a cost-benefit analysis. They found that CBT programs cost approximately \$412 per participant, but that total benefits related to reduced recidivism were \$9,283 per participant. This includes tax-payer benefits from reduced court and incarceration costs as well as benefits to prospective crime victims. In other words, the overall benefit of CBT programs was estimated at \$24 for every dollar spent (Lee et al., 2012). This analysis found a slight, though non-significant (p = 0.18), advantage for specific CBT programs such as those discussed below (e.g., Moral Reconation Therapy). Finally, the analysis did not identify any differences in recidivism rates based on the program setting (prison versus community, p = 0.947; Lee et al., 2012).

In a meta-analysis of 58 studies of the effect of CBT treatments on recidivism, Landenberger and Lipsey (2005) highlighted several treatment elements and characteristics that were associated with larger

reductions in recidivism. Across the full sample, the treatment (CBT) group had a 25% reduction in recidivism compared to the control group (OR = 1.53, p < 0.001). The authors found that treatments that targeted higher risk offenders ($\beta = 0.20$, p < 0.01) and that ensured high quality implementation by monitoring treatment or providing specific training for providers ($\beta = 0.14$, p = 0.07) were associated with particularly good outcomes. Additionally, treatments that focused on anger control ($\beta = 0.32$, p =0.03) and interpersonal problem solving ($\beta = 0.28$, p = 0.03) were associated with better outcomes compared to other treatments. Conversely, treatments focused on victim impact ($\beta = -0.45$, p = 0.02) or behavioral modification (such as contracts or contingency management; $\beta = -0.29$, p = 0.09) were associated with worse outcomes (Landenberger & Lipsey, 2005). Regarding treatments for justiceinvolved women in particular, a meta-analysis of interventions for justice-involved women found that the best outcomes for reduced recidivism were associated with interventions that targeted interpersonal criminogenic risk factors (e.g., family process and antisocial associates; Dowden & Andrews, 1999).

Additionally, Relapse Prevention techniques, which are a type of CBT treatment, have been adapted for use with justice-involved populations. Though Relapse Prevention was developed for SUD populations (Marlatt & Gordon, 1985), its components have been adapted for broader application among justice-involved adults. The Relapse Prevention techniques aim to teach skills to identify high-risk situations (both for substance use relapse and other offending behaviors), manage that risk, and cope with relapse when it does occur. Dowden et al. (2003) carried out a review of correctional treatment studies including elements of Relapse Prevention and assessed whether certain specific components were associated with greater reductions in recidivism. They found an overall small but significant effect of Relapse Prevention treatment compared to control groups (r = 0.15). In addition, the authors found small-to-medium positive effects on the effectiveness of a program for training significant others (e.g., to provide positive reinforcement to the participant for prosocial behaviors; r = .32), discussing the offense chain (e.g., teaching the participant to identify situations that put them at risk of criminal behavior; r = .22), and relapse rehearsal (i.e., role-playing prosocial responses to risky situations; r = .24). Conversely, booster sessions and a focus on providing skills to cope with relapse were not associated with recidivism (Dowden et al., 2003).

In summary, several large meta-analyses have provided evidence for the use of CBT-based treatments in targeting criminogenic thought patterns and in reducing recidivism, though the overall reductions are often small. In these reviews, several specific CBT-based treatments emerged as particularly important treatments for justice-involved adults. In the section below, we review three of these treatments in greater detail.

Veteran-specific research. To our knowledge, there are no studies testing CBT treatments targeting criminogenic risk factors with justice-involved Veterans or with the subgroups of justice-involved women Veterans, justice-involved older Veterans, or justice-involved OEF/OIF/OND Veterans.

Specific cognitive-behavioral therapies for criminogenic risk factors. Specific CBT treatments are characterized by established training programs and treatment manuals aimed at standardizing the program implementation. There are three widely-used brand name CBT treatments developed for

justice-involved adults: Moral Reconation Therapy (MRT), Reasoning and Rehabilitation (R&R), and Thinking 4 a Change (T4C). The next sections provide a brief review of the specific evidence for these treatments. This review focuses mainly on recidivism outcomes, as it is the outcome most consistently presented, and thus the most useful in comparing the treatments. Nonetheless, these treatments may have other important clinical benefits (e.g., in measures of social adjustment, substance use, or mental health symptoms), and some of these are highlighted for each treatment in the text below.

Moral Reconation Therapy.

<u>Treatment description</u>. The most extensive evidence-base is for MRT, which was developed by Little and Robinson between 1979-1983 (Little & Robinson, 1988). It was originally developed for use within a prison-based drug treatment therapeutic community, building on the behavior-based Reconation Therapy by adding elements focused on values and moral judgment as well as those aiming to reduce treatment attrition and to increase participation by justice-involved adults from minority groups (Little & Robinson, 1988). Since then, various adaptations have been developed to target specific populations, including those charged with driving while intoxicated (DWI), domestic violence, or a sex offense (Correctional Counseling Inc., 2010).

The treatment is based on the assumption that criminal behavior stems from low levels of moral reasoning, such as an inability to recognize the impact of self-centered behavior on the well-being of others and society as a whole (Correctional Counseling Inc., 2010). The group counseling sessions use cognitive-behavioral techniques to move participants through 16 Steps in the development of moral reasoning (see Table 9), leading participants to confront personal beliefs, assess relationships, develop a positive identity, enhance self-esteem, decrease hedonism, and increase ability to delay gratification (Milkman & Wanberg, 2007). The program allows each participant to move through the steps at their own pace, such that counseling groups are able to incorporate new members at any time (Little, 2003). The number of group members has varied widely depending on the adaptation and setting, from 5 group members to more than 20 (Milkman & Wanberg, 2007). The frequency of meeting has also varied widely, from once-monthly up to 5-times weekly (Milkman & Wanberg, 2007). It generally takes 12 to 30 sessions to complete the program (Little, 2003).

An important element of MRT is regular homework assignments, including drawings and short assignments designed to be appropriate even for those with low reading skills or intellectual functioning. These assignments are completed by participants and then presented to the group for feedback and assessment during regular sessions. In addition, individual counseling sessions may be provided where appropriate (e.g., to discuss confidential information; Correctional Counseling Inc., 2010).

<u>Overview of the evidence.</u> Several meta-analyses have demonstrated consistent positive effects on recidivism for MRT (Aos et al., 2006; Little, 2001, 2005; Wilson, Bouffard, & Mackenzie, 2005). Most recently, a meta-analysis of 33 published MRT studies meeting specific criteria (e.g., including a comparison group, providing enough information to calculate an effect size, specifying the treatment setting) was carried out by researchers not affiliated with the developers of MRT (Ferguson & Wormith,

2012). They estimated that MRT participants reduced their recidivism by one-third compared to participants who did not receive MRT (p<0.001). Of note, most of the studies were published in a journal owned and operated by Correctional Counseling, Inc. (CCI), which is run by one of the MRT developers. However, Ferguson and Wormith (2012) found that reduction in recidivism for the 21 studies published in CCI-owned journals was actually significantly smaller than in the 12 studies published elsewhere.

Significant positive effects on recidivism were found for studies in both institutional settings and in the community. When comparing settings, significantly larger positive effect sizes of MRT were found in the 25 studies set in institutional settings compared to the 7 studies set in the community. The 20 studies with small sample sizes (<200 participants) produced an overall effect of the same magnitude as the 8 studies with a sample size of over 500. As larger studies may have been provided under conditions more similar to routine practice, the authors concluded that this finding was encouraging. Only 2 studies in this review focused on women, but the studies had a significantly larger positive effect than the 31 studies using samples of men (Ferguson & Wormith, 2012).

<u>Specific studies</u>. Based on the meta-analyses reviewed above, we identified 28 distinct MRT trials carried out in samples of adults. To provide further details about the specific studies that form the evidence base for MRT, we present information on these studies in Table 10.

Overview of studies. These 28 studies were all carried out in the USA. None of the studies was a randomized controlled trial. These 28 trials included studies with a matched control group (4 studies), a sequential cohort control group (2 studies), or a non-equivalent control group (16 studies), and studies without a comparison group (6 studies). Seven of the studies were focused on justice-involved women or had a mixed sample which included separate outcome information for the women.

Overall, 12 studies in this sample found that MRT participants had significantly lower recidivism rates compared to some type of comparison group. As can be seen in Table 10, these studies had various treatment settings and offender populations. Five studies showed a non-significant difference in recidivism rates comparing MRT participants to a comparison group, while none of the studies found a significant negative effect of MRT. The remaining 11 studies presented only raw recidivism data and did not present any statistical test results for recidivism outcomes.

We classified the studies according to the Maryland Scale of Scientific Methods with Level 1 being the weakest design and Level 5 being the strongest (see Table 10; Sherman et al., 1998). Studies which are at least Level 3 are considered rigorous enough to provide interpretable evidence about the impact of an intervention (Farrington, 2003). Importantly, the 6 MRT studies that were at Level 3 or 4 (there were no Level 5 studies) all demonstrated a significant reduction in recidivism in the MRT group. None of the studies focused on justice-involved women had designs strong enough to be categorized at Level 3 or 4 and most did not report statistical tests. Thus, the evidence from studies using more rigorous methods supports the effectiveness of MRT in reducing recidivism in justice-involved men.

Other outcomes. Aside from recidivism, some studies highlighted other benefits of participation in MRT, a few of which are highlighted here. Several studies (e.g., Burnette, Prachniak, Swan et al., 2005; Burnette, Leonard, Robinson, Swan, & Little, 2004; Gilreath, 1995; Lindholm, 1998) found significant

improvements in life purpose (Life Purpose Questionnaire; Hutzell, 1989) and moral reasoning (The Defining Issues Test; Rest, 1990). Other studies found significant reductions in substance use (e.g., Anderson, 2002; Fuller, 2003), as well as improvements in willingness to change substance use (Fuller, 2003).

Veteran-specific research. None of the studies in Table 10 specifically focused on justice-involved Veterans or on the subgroups of justice-involved women Veterans, justice-involved older Veterans, and justice-involved OEF/OIF/OND Veterans. However, there has been some limited implementation of MRT for reentry Veterans in VA (R. Guerra, personal communication, November 19, 2012), though this did not include a formal evaluation. The MRT developers are in the process of producing Veteran-specific adaptations of some MRT materials (K. Robinson, personal communication, October 23, 2012).

Very few studies focused on specific elements that may be of particular interest to researchers expanding MRT to Veterans. For example, none of the reports mentioned elements focused on trauma experience and/or PTSD. However, given the prevalence of IPV among justice-involved Veterans, the 2 studies that focused on IPV offenders may be of particular interest (Fann & Watson, 1999; Leonardson, 2000). In both IPV studies, treatment completers had lower recidivism rates than non-completers, but neither study reported significance levels.

Reasoning and Rehabilitation.

<u>Treatment description</u>. The second most extensively evaluated treatment that targets elements of criminogenic thinking in justice-involved adults is Reasoning and Rehabilitation (R&R). The R&R program was developed by Ross, Fabiano, and Ross (1986) to specifically include the flexibility to apply treatment in various corrections settings, to benefit various justice-involved populations, and to complement other correctional programs (Milkman & Wanberg, 2007).

The R&R program focuses on developing social and cognitive skills such as self-control and problemsolving (Cognitive Centre of Canada, n.d.). The multi-modal group sessions combine group discussions and confrontation with audio-visual presentations, role-playing, games, and homework to develop participant skills in 9 integrated component areas (See Table 11; Cognitive Centre of Canada, n.d.; Milkman & Wanberg, 2007). The main program includes 35 manualized, 2-hour sessions, designed to be provided in closed-groups of 6 to 12 members. The frequency of sessions is flexible, but sessions are generally provided 2 to 4 times per week (Cognitive Centre of Canada, n.d.; Tong & Farrington, 2006). The program is designed for medium- to high-risk offenders with sufficient cognitive ability to engage with the materials (i.e., an IQ of at least 70; Tong & Farrington, 2006).

Beginning in 1996, the R&R researchers began to develop a series of shorter "R&R2" programs designed for lower-risk participants and specific groups, such as justice-involved adults with ADHD, mental health issues, and antisocial driving (Cognitive Centre of Canada, n.d.; Milkman & Wanberg, 2007). These programs aim to limit contact between low- and high-risk offenders by providing a less intensive intervention (12-16 open-group sessions) aimed at building similar skills to the full R&R program (Milkman & Wanberg, 2007).

<u>Overview of the evidence.</u> Like MRT, meta-analyses have found significant benefits of R&R on recidivism outcomes (Aos et al., 2006; Wilson et al., 2005). In the most extensive review, Tong and Farrington (2006) conducted a meta-analysis of 16 studies evaluating R&R. They estimated that the groups receiving R&R reduced their recidivism by 14% compared to comparison groups. There were no significant differences between studies in the USA, Canada and the UK, between studies set in the community and those in jails and prisons, or between larger studies (>250 participants) and smaller studies.

<u>Specific studies</u>. We identified 17 distinct R&R trials carried out in samples of adults. To provide further details about the specific studies that form the evidence base for R&R, we present information on these studies in Table 12.

Overview of studies. Most of the studies were carried out in Europe, including in the UK (9 studies), Sweden (1 study), and Germany (1 study). The other studies were carried out in the USA (4 studies) and Canada (2 studies). All of the studies included some type of comparison group, with 4 studies randomizing participants. The remaining trials included studies with a matched control group (3 studies), a sequential cohort control group (4 studies), and a non-equivalent control group (6 studies). None of the studies were focused on justice-involved women, and none had a mixed sample with separate outcome information for the women.

Most of the studies (11 studies) were at Level 3, 4, or 5 on the Maryland Scale of Scientific Methods. One of these studies found significantly lower recidivism rates for R&R compared to a comparison group. One of these studies found significantly higher recidivism rates for R&R compared to a comparison group (Project Greenlight, discussed below). The remaining studies had mixed or nonsignificant results (4 studies) or did not report tests for any recidivism outcomes (5 studies). Some of these studies did report reductions in recidivism for R&R participants, but the groups were not compared to a control or comparison group (see Table 12). The evidence from this review does not provide conclusive support for the efficacy of R&R in reducing recidivism.

Among the mixed results in R&R studies, one commonly cited failure was the implementation of an adaptation of R&R in the Project Greenlight experiment, in which the participants receiving the intervention had significantly worse outcomes than those who did not receive R&R (Ritter, 2006; Wilson & Davis, 2006). Subsequent discussions have highlighted this project as an example of inadequate implementation of evidence-based practices. First, it has alternately been proposed that the treatment program was too classroom intensive (not in accordance with specific responsivity to lower intellectual ability) and not intensive enough (over too short of a period to get over initial resistance) to affect change in high risk individuals (Wilson & Davis, 2006; Wilson & Zozula, 2011). Secondly, although the basis of the intervention was the R&R program, it was significantly shortened (to eight weeks), and a variety of other (unproven) elements were incorporated (Wilson & Zozula, 2011).

Other outcomes. Despite wide variation in non-recidivism outcomes measures in R&R studies, several studies highlighted improvements after R&R participation on problem-solving skills (e.g., Clarke, Cullen, Walwyn, & Fahy, 2010; Rees-Jones, Gudjonsson, & Young, 2012; Wettermann, Schlafke, & Fegert, 2012).

Other positive outcomes were found for violent attitudes (Rees-Jones et al., 2012; Young, Chick, & Gudjonsson, 2010), impulsivity (Young et al., 2012), and other prosocial traits (Berman, 2005).

Veteran-specific research. None of the studies in Table 12 specifically focused on justice-involved Veterans or on the subgroups of justice-involved women Veterans, justice-involved older Veterans, and justice-involved OEF/OIF/OND Veterans.

In addition, very few studies focused on specific elements that may be of particular interest to researchers expanding R&R to Veterans. For example, none of the reports mentioned elements focused on trauma experience and/or PTSD. Two of the studies implemented an adaptation of R&R2, both with a focus on violent offenders with psychiatric diagnoses (Young et al., 2010; Young et al., 2012). Although recidivism outcomes were not presented, both studies indicated a significant positive treatment effect on violent attitudes.

Thinking 4 a Change.

<u>Treatment description</u>. Although Thinking 4 a Change (T4C) has been less extensively evaluated, it has been widely implemented in US correctional settings since 1997 (Golden, Gatchel, & Cahill, 2006). The program was developed by Bush, Glick, and Taymans (2011) in cooperation with the National Institute of Corrections (Bush et al., 2011). It is used in prisons and jails as well as with participants on probation and parole in the community (National Institute of Corrections, n.d.).

The T4C program aims to change antisocial and criminal behaviors by developing 3 integrated skills areas: social skills, cognitive self-change, and problem solving skills (National Institute of Corrections, n.d.). The curriculum includes 25 lessons (see Table 13), some of which can require more than one session to complete. The developers recommend that sessions be provided 2-3 times per week in closed groups of 8-12 members (Bush et al., 2011).

<u>Overview of the evidence</u>. As noted above, very few studies have tested T4C. In large meta-analyses of several types of treatments for reducing recidivism, T4C studies have been shown to have a positive impact on recidivism (Lee et al., 2012; Lipsey, Landenberger, & Wilson, 2007).

<u>Specific studies.</u> We were able to identify and review 3 evaluations of T4C (see Table 14), all of which were carried out in community settings within the US. One used a matched comparison group, while 2 used a non-equivalent comparison group. None of the studies were focused on justice-involved women, and none had a mixed sample with separate outcome information for the women.

Of the three studies, one showed a significant reduction in recidivism for the T4C group compared to the comparison group. One of the other studies found no significant differences for recidivism outcomes (despite a 34% reduction in recidivism comparing treatment completers to the matched comparison group), while the last study did not report on any recidivism outcomes. Currently, the evidence supporting T4C is limited, and additional well-designed trials may allow for more confident conclusions.

Other outcomes. Only one study of T4C found significant benefits on non-recidivism outcomes, highlighting improvements on social skills and interpersonal problem solving (Golden, 2002).

Veteran-specific research. None of the studies in Table 14 specifically focused on justice-involved Veterans or on the subgroups of justice-involved women, older, and OEF/OIF/OND Veterans. However, there has been some limited implementation of T4C in VA, though this has not yet included a formal evaluation (R. Reaman, personal communication, December 7, 2012).

None of the T4C studies included a targeted trauma component, nor were any focused on particular offender groups.

Comparing MRT, R&R and T4C. To date, no comparative effectiveness studies have been conducted comparing MRT, R&R, and T4C to each other directly in one trial. However, Lipsey et al. (2007) conducted one of the largest meta-analyses examining the effectiveness of CBT interventions for reducing recidivism. In this analysis, there was no significant difference in the impact on recidivism identified between MRT, R&R, and T4C. Lipsey et al. (2007) found an estimated 25% decrease in recidivism among participants receiving some form of CBT intervention versus a comparison group, regardless of the specific type of treatment. In separate meta-analyses reviewed above, MRT participants had an estimated 33% decrease in recidivism (Ferguson & Wormith, 2012) and R&R participants had an estimated 14% decrease in recidivism for T4C, but the two studies that we identified and that presented recidivism outcomes found the decrease to be 34-35%. Similar differences were noted in another review of group CBT interventions, in which Wilson et al. (2005) concluded that R&R may be less effective than MRT or other cognitive behavioral programs, although all treatments.

In general, there are differences in terms of the content of treatment and the implementation of treatment (e.g., type of sessions, number of sessions) across MRT, R&R, and T4C that may make one treatment or another particularly useful in different contexts. From our review, MRT tends to have the most empirical support for its effectiveness, followed by R&R and then T4C. However, the application of these treatments to justice-involved Veterans may involve tailoring aspects of treatment to fit the needs of this population. MRT tends to be the most flexible of the three interventions, with participants working through the program at their own pace in an open-group format (i.e., groups can incorporate new members at any time). Participants generally require 12-30 sessions to complete the MRT steps, and sessions may be offered anywhere from once per month to five times per week. Furthermore, all MRT activities are appropriate even for those with low reading skills or intellectual functioning. On the other hand, R&R and T4C are both structured around closed-groups in which all participants work through the program at the same pace. Both programs require more than 25 sessions, and the developers recommend a frequency of at least 2 sessions per week. Additionally, the R&R developers recommend that participants have an IQ of at least 70 to fully engage with the program materials, and there is no specified recommendation regarding intellectual ability for T4C.

Treatment for substance use disorders. The CBT treatments discussed above focus mainly on reducing criminogenic risk factors such as antisocial thinking and behaviors. Another major criminogenic risk factor is SUDs. There is a range of treatments that are considered evidence-based for the general population with SUDs. The SAMHSA GAINS Center has summarized the evidence-based practices and

treatments for the general SUD population which might be usefully applied to justice-involved adults (see Table 15; Blandford & Osher, 2012).

Research has been conducted to test the efficacy of these SUD treatments in justice-involved adults. Two large meta-analyses of interventions for justice-involved adults have generally found that SUD treatment programs (of varying types) are overall effective at reducing the risk of recidivism (Aos et al., 2006; Lipsey & Cullen, 2007). Lipsey and Cullen (2007) identified seven systematic reviews of widely varying interventions for justice-involved adults with SUDs, finding mean reductions in recidivism ranging from 4-24% compared to a range of comparison groups. Two reviews examining specific SUD treatments for justice-involved adults concluded that therapeutic communities for drug abusing justice-involved adults concluded that therapeutic communities for positive outcomes in both drug use and recidivism (Mitchell, Wilson, & MacKenzie, 2007; Perry et al., 2009). Additionally, one of the reviews (Mitchell et al., 2007) found support for residential SUD treatment and group counseling on recidivism outcomes, but only inconsistent support on drug use outcomes. A further review found mixed evidence for incarceration-based opioid maintenance therapy. This treatment successfully reduced drug use and increased treatment entry on release, but it was not consistently associated with a lower rate of recidivism (Hedrich et al., 2012).

One meta-analysis examined treatments for incarcerated women with SUDs (Tripodi et al., 2011). The authors identified 6 SUD treatment studies that included a comparison group (4 testing therapeutic communities and 2 testing a CBT group) and found a significant overall reduction in recidivism for participants.

The extension of treatment gains from incarceration into the community has been highlighted as an important concern for justice-involved adults with SUDs. As such, aftercare services have been included in best-practices recommendations (Friedmann, Taxman, & Henderson, 2007; National Institute on Drug Abuse, 2012; Peters & Wexler, 2005). In the criminal justice system, aftercare is generally defined as any services provided in the community after prison or jail-based treatment, and most often this begins with transitional intensive services provided in a halfway house (Pelissier, Jones, & Cadigan, 2007). Pelissier et al. (2007) conducted a review of SUD treatment aftercare for justice-involved adults and "concluded that the claim of certainty about [criminal justice system] aftercare effectiveness is not well substantiated and that the precise nature of aftercare services needed is not well understood" (Pelissier et al., 2007, p. 311).

Veteran-specific research. To our knowledge, there are no studies testing specific SUD treatment in justice-involved Veterans or in the subgroups of women, older, OEF/OIF/OND Veterans. However, VHA offers a variety of services shown to be effective for Veterans with a SUD, and in fact many Veterans in this population have a history of justice-involvement. For example, in one VA study of SUD treatment, 36% of the sample had been arrested in the year before starting the study (Ouimette, Finney, & Moos, 1997). Intake data from VA SUD treatment programs at 150 VA facilities from 1998 to 2001 also indicated that the majority of patients had a history of arrest (85% had been arrested at least once, 58% at least 3 times, and 46% had been convicted of at least one crime; Weaver, Trafton, Kimerling, Timko, & Moos, 2013). The recommendations provided in VA/DoD treatment guidelines are broadly in line with

the specific treatments outlined in Table 15. For example, these guidelines recommend psychotherapies such as Cognitive-Behavioral Coping Skills Training along with pharmacotherapies such as opioid maintenance therapy and naltrexone (Department of Veterans Affairs and Department of Defense, 2009b). In addition, the reentry period after incarceration may be an especially beneficial point to link justice-involved Veterans to SUD treatment. Many incarcerated Veterans may make initial gains during incarcerations, such as an enforced period of abstinence, and consequently may be particularly responsive to or open to SUD treatment on their release (McGuire et al., 2003).

Treatments for specific offenses. As noted in Key Question #1, there are generally few differences between Veteran and non-Veteran justice-involved adults in terms of offense characteristics. However, some prevalence rates suggest that justice-involved Veterans may have somewhat higher rates of sex offense and IPV offense compared to justice-involved non-Veterans. Likewise, DUI was identified as being an important element in the justice-involvement of a quarter of Veterans encountered in courts and jails. In the sections below, we briefly describe treatments specific to these offense characteristics.

Sex offender treatment. A handful of reviews have shown promise in sex offender treatment, particularly with CBT specifically adapted for this group (e.g., Aos et al., 2006; Lipsey & Cullen, 2007). Nonetheless, these findings are inconsistent, and authors commonly comment on the low methodological quality of most included studies (Craig, Browne, & Stringer, 2003; Hanson et al., 2009). Importantly, one review of 23 studies did conclude that treatments adhering to the RNR principles were associated with larger reductions in both sexual and general recidivism (Hanson et al., 2009). It is important to note that these reviews, and many studies, cover mixed groups of sex offenders (e.g., rapists and child sex offenders). Though there is some evidence that recidivism risk may vary based on type of sexual offending, the current literature does not allow for conclusions about treatment effectiveness based on type of sex offense (Craig et al., 2003).

Furthermore, a review of 82 studies examined correlates of recidivism in sex offenders (Hanson & Morton-Bourgon, 2005). The major risk factors for sexual recidivism were deviant sexual preferences and antisocial orientation. Regarding violent and general recidivism (among sex offenders), only antisocial orientation was a major predictor. The review concluded that treatments for sex offenders should target general criminogenic risk factors (in line with the evidence discussed above), but should additionally target sex offense-specific risk factors such as sexual preoccupations. Additionally, the authors call attention to the finding that targets of treatment "commonly addressed in sex offenders treatment programs (e.g., psychological distress, denial of sex crime, victim empathy, stated motivation for treatment) had little or no relationship with sexual or violent recidivism" (Hanson & Morton-Bourgon, 2005, p. 1154).

<u>Veteran-specific research</u>. To our knowledge, there are no studies testing specific sex offense treatments in justice-involved Veterans or in the subgroups of women, older, OEF/OIF/OND Veterans.

Intimate partner violence treatment. The two most commonly examined types of intervention for IPV perpetrators are the Duluth model and CBT. The Duluth model assumes IPV is a result of patriarchal attitudes including the belief in men's right to control women. Accordingly, the interventions use

psychoeducation to change such attitudes and beliefs (Pence & Paymar, 1993). This is the intervention type most commonly provided in court-approved programs (Babcock, Green, & Robie, 2004). On the other hand, group CBT interventions focus more on the violent behavior rather than beliefs. Participants are guided to identify the consequences of their use of violence, both positive and negative (e.g., release of tension, a sense of power, increased relationship problems, justice-involvement). Participants are then taught skills and anger management techniques as alternatives to violence (Babcock et al., 2004). Despite these core differences, in practice most interventions do touch on elements of both treatments (e.g., CBT groups often include some elements of changing patriarchal attitudes; Babcock et al., 2004).

Perpetrators of IPV who become justice-involved are often required to complete interventions, despite studies showing only small effects or no effect for such interventions in court-mandated or voluntary programs (Feder & Wilson, 2005; Lee et al., 2012; Stover, 2005). A meta-analysis of 22 controlled studies found only a small overall effect of treatment. Limited to the group of 5 experimental studies, partner reports indicated that 60% of participants in the treatment groups continued their violence versus 65% of participants in the control group (Babcock et al., 2004). Nonetheless, there was variation in results among the studies included in the meta-analysis, indicating that some treatments may work for some perpetrators (Babcock et al., 2004; Cavanaugh & Gelles, 2005). Of note, several studies have demonstrated reductions in IPV perpetration outcomes in the context of SUD treatment (O'Farrell, Fals-Stewart, Murphy, & Murphy, 2003; O'Farrell, Murphy, Stephan, Fals-Stewart, & Murphy, 2004; Stover, Meadows, & Kaufman, 2009; Stuart et al., 2003). Similar reductions in IPV were found for black and white men being treated for SUDs (Scott & Easton, 2010) and for women perpetrators of IPV being treated for alcohol use disorders (Schumm, O'Farrell, Murphy, & Fals-Stewart, 2009).

One potentially promising direction for further research is related to perpetrator typologies and their implications for tailoring treatments. Cavanaugh and Gelles (2005) reviewed the research on typologies of IPV perpetrators and found consistent evidence for 3 types of perpetrators: low, moderate, and high risk.

- The low risk perpetrator was defined by a low severity and frequency of violence, lack of prior justice-involvement, and a lack of mental health issues including personality disorders.
- The moderate risk perpetrator was defined by moderate severity and frequency of violence and the presence of moderate mental health issues including personality disorders.
- The high risk perpetrator was defined by a high severity and frequency of violence, a history of justice-involvement, and high levels of mental health issues including personality disorders.

The authors also concluded that the risk levels are generally stable over time (Cavanaugh & Gelles, 2005; Eckhardt, Holtzworth-Munroe, Norlander, Sibley, & Cahill, 2008). These typologies may have implications for treatment targets, and several authors have called for more well-designed studies to further examine this area (Babcock et al., 2004; Cavanaugh & Gelles, 2005; Stover, 2005).

<u>Veteran-specific research</u>. This risk typology may be a promising area for further research specific to justice-involved Veterans. The typologies outlined above may apply to some Veterans who perpetrate

IPV, but these typologies may not account for combat-trauma and military experiences that may need to be integrated into treatment (Kravetz, 2012; Tinney & West, 2011). Consequently, many of the standard interventions for IPV perpetrators may not be appropriate for all Veterans, both because they often actively ignore the possibility of mental health factors, and because, as noted above, there is little empirical evidence supporting the treatments with any groups of perpetrators (Krill, Taft, & VanHaasteren, in press). Ongoing efforts in VA, to be discussed further in the discussion section, are being devoted to developing interventions for Veterans who have perpetrated IPV or are at risk of doing so.

Taft et al. have reported promising results in a recent pilot study of a pair of interventions to improve relationship functioning and reduce IPV among active-duty military personnel and Veterans (Taft et al., in press; Taft et al., 2013). The "Strength at Home" group intervention (10-12 sessions) has separate adaptations focused on individual men as well as couples. It is CBT-based and includes elements of psychoeducation, conflict management skills and specific coping strategies (Taft et al., 2013). Additionally, each group is small (3-5 Veterans per group) and is co-led by at least one doctoral-level clinical psychologist with a background treating military populations. In this context, Veteran participants are able to discuss their individual situation in a supportive environment including other Veterans and a knowledgeable treatment provider (Krill et al., in press).

To our knowledge, there are no studies testing specific IPV interventions in the subgroups of justiceinvolved women, older, or OEF/OIF/OND Veterans. See the discussion section for further information about ongoing work in VA related to IPV interventions.

Treatment for DUI. Risk factors for DUI are similar to those for other offenses, including alcohol use disorders and antisocial personality traits (Donovan, Queisser, Salzberg, & Umlauf, 1985). Nonetheless, there are few concrete conclusions that have come from research related to DUI interventions, despite mandatory treatment being a common court-requirement after a DUI offense (Warren, Nunez, Klepper, Rosario, & King, 2010). One meta-analysis found an average reduction in DUI recidivism across all identified interventions of 8-9% compared to no intervention (Wells-Parker, Bangert-Drowns, McMillen, & Williams, 1995). Interventions focused on alcohol use (e.g., education or psychotherapy) were better at reducing alcohol-related driving than sanctions, such as revoking drivers' licenses. On the other hand, sanctions such as revoking drivers' licenses were associated with a greater reduction in all traffic crashes (likely due to incapacitation). Consequently, the authors conclude that interventions that combine use of targeted sanctions with alcohol-focused treatment may be the most successful in terms of reducing risk (Dill & Wells-Parker, 2006). Of note, a program that has been tested in South Dakota and is currently being disseminated and tested in other states is the 24/7 program, which has shown the benefit of twice-a-day breathalyzer tests (or continuous alcohol-monitoring ankle bracelets) in reducing repeat DUI arrests (Kilmer, Nicosia, Heaton, & Midgette, 2013).

<u>Veteran-specific research.</u> To our knowledge, there are no studies testing specific DUI treatment in justice-involved Veterans or in the subgroups of justice-involved women Veterans, justice-involved older Veterans, and justice-involved OEF/OIF/OND Veterans. Nonetheless, both reckless driving and SUDs have been highlighted as particular concerns for recently returned combat Veterans (Kuhn, Drescher,

Ruzek, & Rosen, 2010; SAMHSA National GAINS Center, 2008), and this should be taken into account when considering appropriate interventions for justice-involved Veterans with a DUI as part of their case.

Integrated mental health needs with criminogenic risk treatment. The Center for Behavioral Health Services and Criminal Justice Research at Rutgers University (Epperson et al., 2011) has highlighted the importance of integrating interventions for various areas of need. They recommend the development of six complementary modules targeting specific risk areas related to the alleviation of mental health symptoms and the reduction of the risk of recidivism. The modules include medication adherence, criminogenic risk, addiction risk, trauma risk, stress risk, and social disadvantage risk (Epperson et al., 2011). Though not directly based on those modules, two examples of treatments that attempt to integrate needs related to mental health issues and criminogenic risk factors are outlined below. The treatments are Forensic Assertive Community Treatment (Forensic ACT) and the Modified Therapeutic Community (MTC).

Forensic ACT. Forensic ACT was developed to incorporate treatment targeting criminogenic risk factors into the evidence-based mental health intervention Assertive Community Treatment (ACT; see Table 7). There is an extensive evidence-base for the effectiveness of ACT on mental health outcomes (e.g., number of hospitalizations, symptom levels, and quality of life), but in these studies ACT was not shown to reduce justice-involvement or substance use (Morrissey, Meyer, & Cuddeback, 2007). In fact, it has been noted that this type of intensive case management can actually be associated with increased recidivism because of closer monitoring of individuals (Solomon, Draine, & Marcus, 2002). Consequently, attempts have been made to adapt ACT for the justice-involved population, referred to as Forensic ACT, or FACT. The central addition to ACT treatment is a focus on preventing recidivism. Variations on FACT have been implemented; however, there have been few formal examinations of its effectiveness, and the existing evidence is inconclusive (Morrissey et al., 2007). Like ACT, FACT programs aim to provide intensive engagement and oversight efforts to participants, along with accessibility to a central team of providers 24-hours a day.

Project Link is one example of FACT treatment (Lamberti et al., 2001). Project Link aimed to integrate mental health, medical, social, and criminal-justice related services using a mobile treatment team and a residential treatment facility for participants with co-occurring disorders. The FACT team consisted of case managers at 5 community agencies. The case managers directly linked participants to community treatment resources or, for those requiring more intensive supervision, with the mobile care team who provided 24-hour a day support as needed. The intensive support could include residential treatment for co-occurring disorders following a Modified Therapeutic Community (MTC) model. A preliminary evaluation demonstrated positive results for both a reduction of recidivism and a reduction of hospitalizations. Despite the promising results of Project Link, Morrissey et al. (2007) conclude that FACT interventions need to be further defined and rigorously implemented before conclusions about their effectiveness can be made. They additionally recommend examination of incorporating interventions targeted at additional criminogenic risk factors such as the CBT interventions discussed above.

Modified therapeutic community. Another promising model of integrated treatment is the modified therapeutic community (MTC) for justice-involved adults with a SUD in addition to another psychiatric diagnosis. Therapeutic communities (TCs), both community- and prison-based, were originally developed to treat SUDs using self-help techniques and the peer community to foster change (Sacks, Chaple, Sacks, McKendrick, & Cleland, 2012). Subsequently, a modified version of the TC was developed first for use with homeless individuals with co-occurring disorders, and later specifically for justice-involved adults with co-occurring disorders. The MTC retains the characteristic elements of a TC so that participants benefit from the peer recovery community, but some elements are adjusted to meet the particular needs of participants with psychiatric disorders. The modifications are described as making the program "more adaptable and responsive to developmental needs, with reduced time spent in any given activity, less confrontation, increased emphasis on orientation and instruction, fewer sanctions, more explicit affirmation for achievements, and increased sensitivity to individual differences" (Sacks et al., 2012, p. 248).

Furthermore, the MTC model for justice-involved adults includes an additional cognitive-behavioral element focused on changing antisocial attitudes and helping participants to understand the interrelationship of their co-occurring disorders and their justice-involvement (Sacks et al., 2012). Limited research evidence supports the effectiveness of MTCs (both prison- and community-based) for justice-involved adults for reducing recidivism and substance use. Two randomized studies have compared MTC treatment for justice-involved adults to treatment as usual. One study was in a prison setting (Sacks, Banks, McKendrick, & Sacks, 2008; Sacks, Sacks, McKendrick, Banks, & Stommel, 2004; Sullivan, McKendrick, Sacks, & Banks, 2007) and the other study (Sacks et al., 2012) examined MTC treatment provided in the community during reentry. Significant reductions in recidivism were found in both the prison setting (73% reduction in re-incarceration over 12 months; Sacks et al., 2012). Significant reductions in substance use were also found in the prison setting (OR = .43, p < .05 for any illegal drug use 12 months after release; Sullivan et al., 2007). On the other hand, there was no significant impact on mental health outcomes in the prison study (Sacks et al., 2008), and mental health outcomes have not yet been reported for the reentry study.

Veteran-specific research. To our knowledge, there are no studies testing integrated treatments with justice-involved Veterans, or with the subgroups of justice-involved women Veterans, justice-involved older Veterans, or justice-involved OEF/OIF/OND Veterans. Elbogen, Johnson, Wagner et al. (2012) showed that protective factors that would be targeted by psychosocial rehabilitation (e.g., self-determination, resilience, social support, financial management, living stability, employment) were associated with significantly reduced aggression and violence among OEF/OIF veterans.

Psychosocial rehabilitation. One additional approach to potentially reduce criminal recidivism in Veterans would be to identify an array of protective factors that can be enhanced through interventions such as those used in a psychosocial rehabilitation model, which encourages clinicians to focus on improving mental and physical well-being (Glynn et al., 2009; Penk et al., 2010). The central tenets of psychosocial rehabilitation are empowering individuals to set their own recovery goals and promoting active collaboration between individuals and intervention agents (Penk, Flannery, Foa, Keane, &

Friedman, 2000; Schutt et al., 2003). Interventions involve teaching skills to improve functioning at work, home, or social environments (LePage et al., 2006; Martz, Bodner, & Livneh, 2009; Penk et al., 2010).

Applying psychosocial rehabilitation to reduce recidivism is consistent with empirical research showing that impaired functioning within these domains is associated with criminal behavior, aggression, and violence (Swanson et al., 2002; Ullrich & Coid, 2011) and with arguments supporting client participation as a means to improve outcomes for risk management (Heilbrun, 1997). It is also congruent with efforts by the VA (Armstrong, 2010; Goldberg & Resnick, 2010; Penk et al., 2010) and Department of Defense (Seligman & Fowler, 2011) to integrate psychosocial rehabilitation interventions that facilitate resilience among Veterans and service members suffering from PTSD and other psychological and physical injuries.

Veteran-specific research. To our knowledge, there are no studies testing treatments focused on enhancing protective psychosocial factors with justice-involved Veterans, or with the subgroups of justice-involved women Veterans, justice-involved older Veterans, or justice-involved OEF/OIF/OND Veterans.

Summary of Key Question #4. Most of the specific literature about interventions that successfully reduce recidivism is based on the Risk-Need-Responsivity model. This model states that treatments should be targeted at justice-involved adults at high risk of recidivism, should specifically target criminogenic risk factors, and should take into account individual characteristics such as learning style and mental health issues. The most promising interventions include CBT treatments that aim to change antisocial ways of thinking. The most well-known examples of these treatments include Moral Reconation Therapy (MRT), Reasoning and Rehabilitation (R&R), and Thinking 4 a Change (T4C). The most consistent evidence of effectiveness is available for MRT; for example, one meta-analysis found that MRT participants reduced their recidivism by one-third compared to participants who did not receive MRT. The evidence for R&R is less consistent, particularly because one of the major tests of this treatment (Project Greenlight) was not implemented according to recommended guidelines. There is a much smaller amount of research for T4C, but it is widely implemented in criminal justice settings partly because of the low costs of training and materials. In the future, trials with randomized designs would be useful for determining the relative efficacy of these CBT treatments. Furthermore, SUD treatment is also associated with a lower risk of recidivism in addition to benefits on SUD outcomes. A synthesis of systematic reviews found mean reductions in recidivism ranging from 4-24% compared to a range of comparison groups.

For justice-involved Veterans, CBT treatments such as MRT which target criminogenic risk factors (e.g., antisocial thinking) may be useful in treating specific offenses of particular concern for justice-involved Veterans (e.g., sex offenses, IPV, and DUI). In addition, treatments specifically tailored to those offense groups have been tested. Regarding sex offenders, the most promising treatments are CBT-based and incorporate elements targeting general criminogenic risk factors and deviant sexual preferences. There is little evidence supporting particular interventions for IPV perpetrators, though a Veteran-specific intervention aiming to integrate mental health treatment within an intervention to reduce and prevent IPV (Strength at Home) is currently under development. In general, DUI interventions that focus on alcohol use (as opposed to exclusive use of sanctions such as revoking drivers' licenses) have been the

most promising, though research has not identified specific interventions that have been consistently effective.

Providing integrated treatment to justice-involved Veterans with co-occurring psychiatric and SUDs may increase the likelihood of positive clinical, social, and recidivism outcomes. Though the evidence remains limited, potentially promising models of care for justice-involved Veterans with co-occurring disorders include Forensic Assertive Community Treatment and Modified Therapeutic Communities. These integrated treatments focus on many aspects of the person's recovery, including SUD treatment, treatment for other mental health conditions, and treatment for criminogenic risk factors.

Key Question #5: What Are the Factors That Impact Access To and Engagement in Treatment for Justice-Involved Veterans?

Motivation to engage and remain in care. Getting participants to both enter treatment and participate fully is a concern and struggle encountered in research studies and in 'real-world' applications of treatments in varied settings. As such, researchers and clinicians have developed strategies and practices aimed at increasing participation in treatment.

Willingness to enter treatment. This report has underscored the treatment needs of many justiceinvolved adults, including Veterans. Consistent with the chronic nature of many of the identified issues, these treatment needs are ongoing. Using SUDs as an example, many justice-involved adults with SUDs have a history of receiving professional treatment or participating in other programs such as self-help groups or substance education (Karberg & James, 2005), which may indicate that they would be willing to enter treatment again. Among jail inmates with a SUD, 63% had participated in treatment or a program at some point in the past; however, only 19% of (convicted) jail inmates had participated in any SUD treatment or programs since admission (Karberg & James, 2005). Among prison inmates, 40% of state and 49% of federal inmates with a SUD had participated in treatment or programs since admission (Mumola & Karberg, 2006). Regarding mental health issues more broadly, between 31% and 43% of jail, state prison, and federal prison inmates who reported any mental health issue had a recent (past year) history of being diagnosed with or receiving treatment for a mental health issue (James & Glaze, 2006), though it is unclear how many had accessed treatment since their incarceration. There may be a variety of reasons for why inmates do not participate in treatment once admitted. Some of these reasons may have to do with willingness or motivation, such as negative past experiences with treatment and/or concern about being viewed within a correctional facility as someone in need of mental health treatment, and some reasons may not, such as limited resources in a jail or prison.

<u>Veteran-specific research.</u> For Veterans, much of what we know regarding their willingness to seek treatment is also related to SUD treatment. According to Veteran reports to HCRV and VJO specialists, almost half of Veterans contacted by HCRV (49%) and more than half (60%) of those contacted by VJO had received professional treatment for a SUD at some point in the past. At the time of contact, and based on the impressions of VJP outreach specialists, 38% of Veterans contacted by HCRV (in prisons) and 66% of Veterans contacted by VJO (in courts or jails) were in need of SUD treatment, with most Veterans in that subgroup saying they would be willing to participate in SUD treatment if it were offered

to them (77% for HCRV and 87% for VJO contacts; Department of Veterans Affairs, 2012b). Similarly, 32% of Veterans contacted by HCRV and 62% of those contacted by VJO were in need of psychiatric treatment, with 84% of HCRV contacts and 94% of VJO contacts reporting a willingness to participate in psychiatric treatment (Department of Veterans Affairs, 2012b).

To our knowledge, there are no studies assessing the willingness to enter treatment for the subgroups of justice-involved women Veterans and justice-involved older Veterans.

OEF/OIF/OND Veterans. In a sample of Veterans contacted by HCRV, OEF/OIF/OND Veterans were more likely to report a willingness to receive VA mental health services (65%) than were other Veterans (59%), but were less likely to report a willingness to enter VA residential treatment (31% of OEF/OIF/OND Veterans versus 37% of other Veterans (Tsai et al., 2013c).

Attrition. Many participants in treatment programs do not complete their course of treatment, and this attrition is associated with poor outcomes, e.g., little symptom relief, inefficient use of limited treatment resources, and recidivism (Barrett, Chua, Crits-Christoph, Gibbons, & Thompson, 2008; Little & Robinson, 1988; Olver, Stockdale, & Wormith, 2011). Attrition is most commonly defined as dropping out of treatment before completing a pre-specified number of sessions or a treatment protocol, though the definition varies across individual studies (Barrett et al., 2008).

In a recent review including 114 studies of treatment programs for offenders, the overall attrition rate (for those who started treatment), was 27.1%, with a higher rate in sex offender programs (27.6%) and domestic violence programs (37.8%) compared to general correction programs (20.6%) and violent non-sex offender programs (26.9%; Olver et al., 2011). The overall attrition rate increased to 35.8% when all those selected or assigned to a treatment were included, i.e., including pre-treatment drop-outs. These rates are somewhat higher than estimates of the attrition rate for psychotherapy generally. Across 669 studies of adult psychotherapy, the weighted attrition rate for participants who started treatment was 19.7% (Swift & Greenberg, 2012). Importantly, neither of those reviews included SUD treatments. Although there are no comprehensive review estimates of SUD treatment drop-out, it is generally considered to be high, with at least half dropping-out in within the first month (Ball, Carroll, Canning-Ball, & Rounsaville, 2006; Stark, 1992). This is concerning, given that a review of general psychotherapy for half of them to experience improved symptoms (Hansen, Lambert, & Forman, 2002).

<u>Veteran-specific research.</u> To our knowledge, there are no studies examining treatment attrition in justice-involved Veterans or in the subgroups of justice-involved women Veterans, justice-involved older Veterans, and justice-involved OEF/OIF/OND Veterans. However, among veterans with PTSD, anger problems have been shown to be empirically related to attrition and treatment dropout as well as poorer PTSD treatment efficacy (Forbes et al., 2008).

Assessing motivation and treatment readiness. A first step in attempting to promote participation in treatment and limit attrition is accurate assessment of dynamic individual attitudes and characteristics that impact these outcomes. To demonstrate the theoretical link between treatment readiness (i.e., the motivation and ability to enter and participate fully in treatment) and treatment participation, Ward et

al. (2004) developed a model of treatment readiness, known as the Multifactor Offender Readiness Model (MORM). The model specifies internal (personal) and external (program and context) factors that influence treatment readiness. Individual internal characteristics (e.g., cognitive, affective, volitional, behavioral, and identity factors) interact with each other and with contextual factors (e.g., circumstances, location, opportunity, resources, support, program, and timing) to provide a dynamic picture of how likely an individual is to engage in and benefit from treatment (McMurran & Ward, 2010; Ward et al., 2004). Informed by the personal factors highlighted in the MORM, Casey et al. (2007) developed and validated the Treatment Readiness Questionnaire (TRQ) in Australia with a group of male offenders in prisons and the community. The TRQ is a 20-item self-report assessment tool and includes four subscales (i.e., attitudes and motivation, emotional reactions, offending beliefs, and efficacy). Scores were shown to be moderately correlated with a measure of subsequent treatment engagement in a cognitive skills program (Casey et al., 2007).

Four other tools to measure motivation and treatment readiness were highlighted by Peters et al. (2008), including the Circumstances, Motivation, Readiness, and Suitability Scale (CMRS; Leon, Melnick, Kressel, & Jainchill, 1994), the Readiness for Change Questionnaire (RCQ; Rollnick, Heather, Gold, & Hall, 1992), Stages of Change Readiness and Treatment Eagerness Scale (SOCRATES; Miller & Tonigan, 1996), and the University of Rhode Island Change Assessment Scale (URICA; DiClemente & Hughes, 1990). All four were initially developed for use with adults with SUDs. Furthermore, the CMRS was developed specifically for justice-involved adults, while the SOCRATES has been validated with justice-involved adults (Peters et al., 2008). The RCQ, the SOCRATES, and the URICA are all based on the "stages of change" model, which centers on five stages: precontemplation, contemplation, preparation, action, and maintenance (Prochaska & DiClemente, 1992). Overall, assessment of current levels of treatment readiness and/or stages of change may be helpful in determining the appropriateness of different types and levels of treatment for justice-involved adults.

<u>Veteran-specific research</u>. To our knowledge, there are no studies examining the use of tools to assess motivation and treatment readiness with justice-involved Veterans or with the subgroups of justice-involved women, older, or OEF/OIF/OND Veterans.

Motivational Interviewing (MI). The most prominent strategy aimed at influencing an individual's readiness for treatment is the use of MI techniques (Miller & Rollnick, 1991). Originally developed for use with adults with SUDs, there is extensive evidence for the utility of MI across psychiatric disorders to improve intention to change and to increase engagement in treatments, as well as substance use and health-related behaviors (Lundahl, Kunz, Brownell, Tollefson, & Burke, 2010). In a review which included 15 trials of MI for participants with a SUD, effect sizes across all outcomes (e.g., drinking frequency, abstinence rate, alcohol-related problems) were moderate, with significant Hedges' *g* effect sizes ranging from 0.30 to 0.95 (Dunn, Deroo, & Rivara, 2002). Dunn et al. (2002) also concluded that MI is best used as an enhancement to more intensive treatment (e.g., one or two MI sessions provided at the start of a program). Consequently, MI is regularly included as a recommended element of treatment for justice-involved adults (e.g., Blandford & Osher, 2012; Epperson et al., 2011). McMurran (2009) conducted a review of studies of MI with varied groups of offenders (e.g., SUD, IPV, and DUI samples), finding the strongest support for the benefits of MI on retention in and motivation for treatment, with

more mixed results for behavior change and recidivism. Of note, Motivational Enhancement Therapy (MET) is an adaption of MI that is brief (i.e., 2 to 4 sessions), and has shown favorable results with problem drinkers (Miller, 2000).

<u>Veteran-specific research.</u> One randomized controlled trial of MI specifically targeted justice-involved Veterans (Davis et al., 2003). Jail-incarcerated Veterans meeting criteria for a SUD were randomly assigned to a group that received individual feedback using MI techniques or to a no-feedback control group. The participants assigned to receive feedback were more likely to access addictions treatment at a VA clinic after release, particularly when the intervention occurred close to their release date (Davis et al., 2003). Similarly, in another randomized study which included homeless, unemployed, substancedependent Veterans applying to be wait-listed into a VA residential homeless/SUD treatment program, participants were randomized to a MI-based or a standard intake interview (Wain et al., 2011). Those Veterans who received the session of MI were significantly more likely to enter the treatment program (95% compared to 71% who received the standard interview). The results for length of participation and treatment completion were not significantly different, but they also favored the MI group.

To our knowledge, there are no studies testing MI with the subgroups of justice-involved women, older, and OEF/OIF/OND Veterans.

Critical Time Intervention. Another intervention aimed at promoting successful and long-term engagement with treatment is Critical Time Intervention (CTI), which aims to prevent homelessness among adults with serious mental health issues as they transition from an institution to the community (Susser et al., 1997). Originally developed to support individuals transitioning from a homeless shelter, it has been also been used after psychiatric hospitalization, including with Veterans (Herman et al., 2011; Kasprow & Rosenheck, 2007; Tomita & Herman, 2012). Furthermore, there is ongoing development of an adaptation focused on the transition between prison and the community (Draine & Herman, 2007; Jarrett et al., 2012). The intervention is time limited, based on three 3-month phases aiming to support continuity of care during the period immediately following release from an institution, including increasing treatment engagement using techniques such as MI (Herman, Conover, Felix, Nakagawa, & Mills, 2007). In the first phase (Transition, months 1-3), the CTI worker provides extensive support, including home visits, to develop a care plan and resolve conflict between caregivers and the client. During the second phase (Try-Out, months 4-6), the CTI worker monitors and supports the client's problem solving skills and continues development of a support network. Finally, in the third phase (Transfer of Care, months 7-9), the CTI worker works with the client and his or her support network to reaffirm roles and set out longer-term goals for life in the community, ending with an event (party/meeting) to symbolize the full transfer of care and the end of involvement by the CTI support worker (Herman et al., 2007).

<u>Veteran-specific research</u>. To our knowledge, there are no studies testing CTI with justice-involved Veterans, or with the subgroups of justice-involved women, older, or OEF/OIF/OND Veterans.

Adaptive continuing care. Similarly, adaptive continuing care strategies may be helpful for dealing with the range of needs encountered by those working with justice-involved adults (and justice-involved

Veterans). Such adaptive protocols use regular assessments of progress to inform changes in a treatment plan, for example by adding sessions of MI if motivation or engagement are lacking, by increasing the intensity of SUD treatment if a relapse has occurred or seems likely to occur, or by transitioning to lower intensity telephone monitoring after a successful intervention (McKay, 2009). Well-executed adaptive care can potentially result in long-term, cost-effective benefits by accurately targeting specific resources to those at specific points in their recovery (Collins, Murphy, & Bierman, 2004). This type of treatment requires the use of assessment instruments (some of which have been discussed earlier in the report) that can capture changes over time for variables related to outcomes of interest. Adaptive protocols could potentially be developed for justice-involved Veterans, in which "decision rules" inform treatment changes based on assessment values for "tailoring variables" (e.g., a score above a certain level on an assessment for risk of relapse could trigger a shift to more intensive treatment; McKay, 2009, p. 168).

<u>Veteran-specific research</u>. To our knowledge, there are no studies testing the use of adaptive treatments with justice-involved Veterans, or with the subgroups of justice-involved women, older, or OEF/OIF/OND Veterans.

Treatment courts. Treatment courts can provide an important link between justice-involved adults and services in the community. Beginning in 1989, many (usually nonviolent) substance-abusing or substance-dependent, justice-involved adults have been offered the opportunity to participate in specially developed drug treatment courts instead of normal criminal prosecution. As of June 2012, there were 2,734 drug courts across the country (National Association of Drug Court Professionals, 2012). Overall, drug courts aim to coordinate support that results in individuals ending their abuse of substance(s) and associated criminal activity. These courts generally include close monitoring by a judge and a multidisciplinary team, including regular drug testing. In addition, offenders are often given case management for formal SUD treatment in the community, and in some cases, offenders are linked to evidence-based treatments provided specifically to court participants, such as MRT (Little, 2006). Sanctions and rewards are implemented based on compliance and success with the plan agreed upon by the judicial team (e.g., jail time for non-adherence or praise from the judge for progress; National Association of Drug Court Professionals, 1997). In an assessment of the evidence related to drug treatment courts, Marlowe (2011) found consistent support for the efficacy of drug courts in reducing recidivism and costs. Specifically, across five meta-analyses, which included evidence from randomized and high quality quasi-experimental studies, Marlowe estimated that drug courts reduce recidivism by 8-15% compared to other forms of adjudication.

Mental health treatment courts have also been developed based on a similar model, and evidence for their efficacy is growing (Almquist & Dodd, 2009). These courts differ from drug courts in that they receive justice-involved adults with a wider range of charges and a greater variety of needs (likely including SUDs) for ongoing services and treatment in the community (Council of State Governments Justice Center, 2008). Similar to drug courts, mental health courts rely on multidisciplinary teams to design a treatment and supervision plan, including tailored sanctions and rewards that are employed based on participants' compliance and engagement in treatment (Almquist & Dodd, 2009).

Veteran-specific research. Recently, more attention has been paid to the relevance of Veteran-specific experiences and problems in court settings (Giardino, 2009; Hafemeister & Stockey, 2010; Holbrook, 2010; McGuire & Clark, 2011; Pinals, 2010; Wong et al., 2013). In this context, Veterans treatment courts have been developed and expanded to meet the needs of justice-involved Veterans with mental health issues and/or SUDs (Clark, McGuire, & Blue-Howells, 2010; Russell, 2009; Smee et al., in press). Veterans courts include standard treatment court elements such as regular judicial review, a multidisciplinary team and close monitoring of progress. They are particularly conducive to linking justice-involved Veterans to appropriate and available VA services as they almost always include VA staff in the courtroom and as part of the court team (National Association of Drug Court Professionals, 2010). Additionally, an important element of Veterans treatment courts is mentoring by Veterans in the community, capitalizing on the camaraderie many Veterans feel for others with a shared military experience (Hawkins, 2010). At least one Veterans treatment court has additionally implemented a life skills training group to supplement the other court activities (Ungvarsky, Conaty, & Bellflower, 2012). Though the first Veterans court began only in 2008, by June 2012 there were 104 Veterans courts across the country (Justice for Vets, 2012) and early evidence has supported their efficacy (Cavanaugh, 2011).

However, as the number of Veterans treatment courts has increased, further attention has been paid to identifying those justice-involved Veterans whose offending can be directly linked to military service-related mental health issues. This is particularly important in the case of violent offenses, where relapse (and the associated re-victimization) cannot be accepted as a part of the recovery process as it may be in the case of drug treatment courts (Fairweather, Gambill, & Tinney, 2010; Hawthorne, 2009; Kravetz, 2012; Tinney & West, 2011). Justice-involved Veterans whose offending is likely related to their military service experience (e.g., those who lack a history of violence prior to deployment) may be expected to benefit most from the Veteran-focused resources of the Veterans treatment court (Kravetz, 2012; Tinney & West, 2011).

To our knowledge, there are no studies examining treatment courts for the subgroups of justiceinvolved women Veterans, justice-involved older Veterans, or justice-involved OEF/OIF/OND Veterans.

Peer-based support.

Veteran-specific research. Peer-based support has been highlighted as an important source of support for Veterans generally (Resnick & Rosenheck, 2008), as well as specifically for justice-involved Veterans (Rosenthal & McGuire, 2013). In the case of incarcerated Veterans, peer-support groups encourage the exchange of information and support between Veterans. These groups supporting Veteran prisoners may also include Veteran staff at the facility. These groups can be an important source of emotional support in dealing with incarceration as well as a source of information about available community and VA services, including support in developing a reentry plan as an individual's date of release nears (Rosenthal & McGuire, 2013). One formal example of incorporation of an element of peer-based support into a program for incarcerated Veterans is the Community of Veterans Engaged in Restoration (COVER) program, which includes elements of restorative justice, treatment, service-linkage and reentry services. Initially, Veteran participants in COVER are housed together in a modified therapeutic community style jail dormitory incorporating peer-support elements with formal treatment (Schwartz & Levitas, 2011). Furthermore, peer-support has also been included as a formal element of Veterans treatment courts in the form of Veteran mentors in the community that provide encouragement and a positive example for justice-involved Veterans as they work through their treatment program and work toward accomplishing other goals (Moore, 2012).

To our knowledge, there are no studies examining peer-based support for the subgroups of justiceinvolved women, older, or OEF/OIF/OND Veterans.

Summary of Key Question #5. In working with justice-involved Veterans, it can be important to consider and make efforts to improve the level of motivation and readiness for treatment by utilizing motivational assessment and enhancement at the outset of and throughout treatment. Even when there is an initial willingness to enter treatment, many justice-involved adults do not remain in treatment long enough to receive the recommended dose of treatment. Assessment tools such as the Multifactor Offender Readiness Model and the Circumstances, Motivation, Readiness, and Suitability Scale can monitor changes in motivation and readiness and can help to identify justice-involved Veterans who are likely to respond to treatment. There are several strategies and programs that may be helpful in increasing the level of motivation and readiness in this population, which may result in an increased willingness both to enter treatment and to remain engaged over time. One prominent strategy is the use of Motivational Interviewing (MI). In one randomized controlled trial, substancedependent justice-involved Veterans who received MI feedback were more likely to access addictions treatment at VA after release than were control participants. Other potential interventions include the Critical Time Intervention, which is focused on enhancing engagement in treatment during the transition between prison and the community, and adaptive protocols, which could be used to create "decision rules to inform treatment changes based on assessment. Furthermore, Veterans treatment courts (in partnership with VA) have been introduced to link justice-involved Veterans with appropriate services sensitive to the particular needs of Veterans. This includes elements of Veteran peer-support, which has been developed in prisons, jails, and courts to provide emotional support as well as information about available services to justice-involved Veterans.

Summary and Discussion

This review found that justice-involved Veterans tend to be similar to other justice-involved adults in having a variety of treatment needs. They often have mental health concerns, ranging from low-level symptoms to serious psychiatric disorders. Some of these issues, such as depression or psychotic disorders, are not considered criminogenic (directly associated with offending). Others, such as substance use disorders (SUDs) and antisocial personality disorder are criminogenic, and treating them may have the additional benefit of reducing the risk of recidivism. As a result of these similarities, the large body of research on justice-involved adults may be able to inform programs that will result in positive outcomes for many justice-involved Veterans. Nonetheless, some justice-involved Veterans may have additional service-related needs that have been less examined in the current literature. Foremost among them may be the specific impact of adding military trauma (e.g., combat trauma, military sexual trauma) to the already high prevalence of trauma experiences among justice-involved adults. Other concerns include the relatively high rates of violent offenses of incarcerated Veterans compared to incarcerated non-Veterans, including higher rates of sex offenses and intimate partner violence, as well as a concerning prevalence of DUI offenses.

Much of the role of VJO and HCRV specialists is focused on assisting Veterans to access individuallyappropriate treatment. Given this focus, appropriate assessment is critical. This review identified a variety of assessment tools that encompassed different levels of screening and different levels of detail. These allow for flexibility in the level of assessment. Regarding risk of recidivism, a simple tool based on easily accessible administrative data has shown promise in the initial identification of justice-involved adults at a high-risk of recidivism. Additionally, in many cases, relevant information may be available from assessments carried out by correctional authorities. There may be opportunities to increase coordination with correctional systems to ensure assessment information is shared and to avoid both replication of efforts and missed opportunities (Osher, D'Amora, Plotkin, Jarrett, & Eggleston, 2012).

This review found evidence for the positive effects of providing mental health treatment to justiceinvolved Veterans. Research on evidence-based treatments for adults with mental health concerns such as depression, anxiety, PTSD, psychotic disorders, and substance use disorders are likely to translate well to support the needs of Veterans. Furthermore, the evidence supports additional positive effects of utilizing principles from the Risk-Need-Responsivity model to attempt to end the cycle of justiceinvolvement. In particular, well-designed and implemented CBT interventions that alter criminogenic ways of thinking and behaving are worth consideration of wider implementation with justice-involved Veterans. The most promising of these treatments is Moral Reconation Therapy (MRT), whereas the evidence supporting Reasoning & Rehabilitation (R&R) is more varied, and the evidence for Thinking 4 a Change (T4C) is still very limited.

Unlike the limited options of many justice-involved adults, many justice-involved Veterans will have the advantage of access to VA treatment that can improve their chances of positive outcomes. Veterans have access to VHA evidence-based services to treat their mental health, substance use disorder, and physical health needs (e.g., Department of Veterans Affairs and Department of Defense, 2009a; Department of Veterans Affairs and Department of Defense, 2009b, 2010). In addition to these

treatments, the criminal justice literature reviewed above has highlighted the benefit of additional treatments that target other established criminogenic risk factors, such as ways of thinking that support the continuation of a criminal lifestyle. The community linkage strengths of VJP may be able to ensure that justice-involved Veterans are able to take advantage of community resources (e.g., to supplement VA services) that are both evidence-based and sensitive to the particular needs of Veterans.

Another important ongoing consideration concerns Veteran engagement with treatments that they may be linked to by VJP specialists. As noted in this report, treatment attrition and lack of engagement are significant problems that reduce the likelihood that participants will benefit from participation in treatments. Using strategies such as MI and adopting formal case management programs such as CTI may help to ensure that justice-involved Veterans receive maximum benefit from their treatments.

This review has described the results of published studies examining treatments for justice-involved adults. In addition to these published studies, several evidence-based treatments are in the early stages of implementation in VA. Though these treatments have not been evaluated formally, they can provide information on how the treatments reviewed in this report may best be used with justice-involved Veterans. The next section describes some of this ongoing work with Veterans in VA.

Current Work in VA

There has been limited use of MRT and T4C within VA, although neither has been formally evaluated with Veterans. The following section highlights some of the experiences of the providers who are involved with these treatments. This is followed by a discussion of ongoing work by VA researchers to develop interventions to reduce and prevent IPV among Veterans.

Moral Reconation Therapy. There is ongoing consultation between VJP representatives and the developers of MRT (Kenneth Robinson and Gregory Little) to adapt materials for Veterans (K. Robinson, personal communication, October 23, 2012). This consists mainly of creating a new workbook including Veteran-centric examples and stories rather than changing the content of the treatment. According to Robinson, wide implementation of MRT has shown that the standard elements of the treatment can translate successfully for specific cultural groups. Whether or not the hardcopy materials are adapted, the interactive group format of the treatment encourages group members to guide discussions by setting out examples and experiences directly relevant to that group. In particular, Robinson has highlighted the possible benefit of MRT in developing insight in participants, i.e., a greater understanding about why treatment matters and why it is important to fully participate. This may additionally help to increase adherence with other treatments that Veterans may be receiving.

Rachael Guerra, a psychologist and former VJO specialist (currently Assistant Chief, Domiciliary Service, VA Palo Alto Health Care System), completed MRT training and ran an MRT group for justice-involved Veterans for approximately one year (R. Guerra, personal communication, November 19, 2012). The outpatient group (ultimately serving more than 10 Veterans) mainly included Veterans who were recently released from prison and were transitioning to inpatient SUD treatment. Guerra found the program to be useful and well-received by the Veterans. For example, many of the participants were having problems adjusting to the inpatient milieu. While in prison, many Veterans were conditioned to

avoid asking for help and being vulnerable, and this would sometimes limit their ability to benefit from the full therapeutic inpatient experience. Anecdotally, these Veterans found participation in the MRT group to be helpful in this part of their readjustment. They also thought that the program could be beneficial for a wider group of Veterans.

Guerra noted the importance of integrating awareness and consideration of Veterans' past experience of trauma. Veterans generally seemed to appreciate the MRT materials and, in group discussions, were able to apply the language and examples to their Veteran-specific experiences. Overall, Guerra supported the expansion of opportunities for MRT-participation by Veterans, though she noted that this should include formal evaluation to establish whether the group adds to other available VA services. On the basis of the experiences described above, one study could formally compare the experiences of reentry Veterans as they transition to milieu treatment with or without added MRT.

Thinking 4 a Change. Additionally, current VJO Specialist Rainy Reaman (Grand Junction VA Medical Center) has been offering T4C to justice-involved Veterans (R. Reaman, personal communication, December 7, 2012). Thus far, approximately 30 Veterans have started the program, with 7 having completed the 6-month program. Reaman noted the free manual and free initial training materials, as well as the wide adoption in criminal justice settings, as being significant factors in the selection of the T4C program over other similar offerings, such as MRT. Veterans have been referred to the groups mainly from other VA services, such as SUD and mental health treatment programs, housing programs, and VJO. Most of the Veterans volunteer to participate (and are never court-mandated), though sometimes there is an element of coercion, such as a probation requirement to participate in some (unspecified) treatment. Some participants have given permission for the T4C facilitators to share the Veteran's progress with a judge or probation officer.

The closed-groups meet once per week for 6-months, and according to Reaman, the length of the program has meant that the groups have struggled with attrition. Nonetheless, the materials have been easy for the facilitators to follow and have generally been applicable to Veterans. Reaman does note, however, that Veterans have been resistant to the extensive use of role playing in the materials. Veterans providing anecdotal feedback have indicated that they have enjoyed and benefitted from participation in T4C. For example, some participants have reported that the focus on developing skills around being aware of their current state of mind and taking the time to think things through before acting has helped them adapt to civilian life after military training and experiences that may have required reacting immediately in high stress situations.

Intimate Partner Violence. Additionally, there is ongoing systematic research within VA to develop interventions to reduce and prevent IPV. At least two VA researchers have been developing Veteran-specific interventions.

One of these is the manual-guided, CBT-based Strength at Home program, developed by Casey Taft (Psychologist, National Center for PTSD, Boston VA Medical Center). Research has been ongoing over the past 5 years, and the results of an initial pilot trial were discussed within the review of IPV treatment earlier in this report. These results showed promise in improving relationship functioning and reducing IPV with active-duty military personnel and Veterans (Krill et al., in press; Taft et al., in press; Taft et al., 2013). The Strength at Home programs were developed in particular as a result of the research showing combat-PTSD as an important risk factor for IPV perpetration (C. Taft, personal communication, November 27, 2012). Consequently, participants' trauma histories are discussed at the beginning of the treatment program, including Veteran-specific combat trauma experiences, to establish the ways in which relationship problems may be related to ongoing struggles with these past experiences. Full-scale clinical trials of both the individual Veteran-perpetrator program and the couples program are ongoing. One trial is comparing Strength at Home to treatment as usual for individual Veterans who have perpetrated IPV (Department of Defense, Grant # PT073945, PI: Casey Taft). The other trial is comparing Strength at Home to Supportive Group Therapy for distressed couples (Centers for Disease Control, Grant # U49/CE001248, PI: Casey Taft).

Rachel Latta (Psychologist, Bedford VA Medical Center) has also been developing a Veteran-focused IPV intervention that addresses mental health issues that standard community IPV interventions often explicitly ignore (R. Latta, personal communication, November 13, 2012). The treatment, called Contextual Intimate Partner Violence Therapy, aims to ensure comprehensive treatment that targets all relevant factors. The intervention begins with several sessions of assessment to establish the full context of each Veteran's use of violence and how the Veterans understand that context. This is followed by a session reviewing the identified targets for treatment and setting out a treatment plan, including referrals to other specific treatment where appropriate (e.g., VA SUD treatment). Subsequently, individual treatment is provided from three months up to a year depending on the level of complications. A variety of techniques is used at the discretion of the treatment provider, and may include, for example, CBT and Dialectical Behavior Therapy. There is an additional emotions-targeted group element. As Latta noted, when many of the Veteran participants begin the treatment, the only emotion they are able to identify is anger, and the group aims to expand participants' awareness of a wider range of emotions. Approximately 45 Veterans have participated in the program so far, with some basic feedback collected. A formal trial, focused on justice-involved Veterans referred by VJO, is scheduled to begin soon.

Limitations

The main limitation of the research reviewed in this report is the low quality of many treatment studies carried out with justice-involved adults. There are few fully randomized trials, and many studies use analysis techniques likely to lead to bias, such as comparing treatment completers to non-completers. Nonetheless, the large volume of research has resulted in some fairly consistent, though broad, conclusions across large reviews (e.g., support for the RNR model and CBT treatments generally). Our search strategy focused on identifying the most influential large reviews and meta-analyses, and consequently we may not have captured all individual treatment studies, particularly if they focused on less-common interventions.

In addition, very little of the intervention research focused on justice-involved *Veterans* specifically. In particular, the literature around trauma-informed interventions for justice-involved adults is limited, and it does not examine ways in which the addition of Veteran-specific trauma may impact outcomes. The

wider literature is also limited when it comes to justice-involved women and justice-involved older adults, with no identifiable intervention research with justice-involved women Veterans or justiceinvolved older Veterans. Similarly, there is limited work in the role of family or loved ones in treatment.

Strengths

Despite these limitations, this review brought together findings about a wide range of needs and treatment options for justice-involved Veterans. The sample of studies relating to needs highlighted the interrelated concerns of mental health issues, substance use disorders, TBI, physical health problems, and homelessness. By examining influential reviews and meta-analyses of treatment options, this review was able to identify points of consensus around best practices likely to lead to positive outcomes for justice-involved Veterans. Further examination of a targeted subset of studies aimed to identify possible Veteran-relevant elements of MRT, R&R and T4C. Finally, this review has identified holes in the literature relating specifically to justice-involved Veterans, which may help to inform further research.

Recommendations for Future Research

Based on this review, there are several research questions that still need to be addressed. Many of these research areas pertain to the way that the treatment literature on justice-involved adults can be applied to justice-involved Veterans. In addition, much of the previous research in this field has been limited by low-quality methodology. It is important that conclusions regarding justice-involved Veterans are based on high-quality designs. Even where randomized experiments may not be possible, researchers should ensure (at a minimum) that they are conducting well-controlled, quasi-experimental studies. Findings from such studies are more likely to provide accurate and useful information that may contribute to improved services for justice-involved Veterans. A series of guiding questions to consider include:

- 1) Do evidence-based treatments that have been shown to reduce recidivism in justice-involved adults similarly reduce recidivism in justice-involved Veterans? As we stated above, most of the trials testing the efficacy of MRT and other treatments were conducted in general justice-involved populations. The next step will be to see if similar efficacy is found when justice-involved Veterans are examined specifically. A related issue is whether or not different adaptations might increase the effectiveness of these treatments by decreasing symptoms and likelihood of recidivism. For example, how can treatment for justice-involved Veterans best deal with the effects of trauma experienced by some justice-involved Veterans?
- 2) Are there identifiable subgroups/typologies of justice-involved Veterans? Research could examine if there are particular treatments that are more or less effective with subgroups of Veterans (i.e., based on their type of offending and other needs). For example, there may be a combat-typology associated with the perpetration of crimes such as IPV. However, to date, these typologies are mainly speculative, and they call for more rigorous investigations.
- 3) What treatment adaptations might be needed to serve the needs of different demographic groups of justice-involved Veterans? In particular, more research is needed to determine the characteristics of justice-involved women Veterans and to examine how their treatment needs may or may not

differ from justice-involved men Veterans. In addition, more research is needed to assess the needs of OEF/OIF/OND Veterans. For example, it is currently unclear what the rate of justice-involvement is for this population. Also, to our knowledge, there are no published studies assessing suicide risk in subgroups of justice-involved Veterans (e.g., women or OEF/OIF/OND) even though high rates of suicide have been reported in both the Veteran population and the criminal justice population.

- 4) How would the implementation of newer treatments focused on reducing recidivism interact with other VA benefits that a justice-involved Veteran may receive? How can these treatments be integrated successfully? What would be the cost of implementing different treatments? For example, MRT and R&R have costs for training and materials, whereas there is no initial charge for the T4C training and materials (although the cost of reproducing T4C materials such as workbooks does fall to the treatment provider).
- 5) How can VJP best interface with outside treatment providers to ensure access to appropriate recidivism-focused interventions for justice-involved Veterans? Should these necessarily be Veteran-specific group treatments? Is there an impact of training community treatment providers to be more informed about Veteran culture and VA-services? What can be done to improve coordination of risk reduction strategies with existing criminal justice supervision and treatment programs among justice-involved Veterans?
- 6) Who are the justice-involved Veterans at high risk of recidivism who would be most likely to benefit from interventions targeting criminogenic risk factors? Are there items currently collected by VJP specialists using the Homeless Operations Management and Evaluation System (HOMES) assessment that could effectively categorize justice-involved Veterans as being at low, moderate, or high risk of recidivism? This could include, for example, items such as age of first arrest, total number of lifetime arrests, and clinical impressions of substance use disorders.
- 7) What is the proportion of justice-involved Veterans who are service connected for mental health and other issues? How does this relate to the types of crimes committed and the likelihood of incarceration?

In conclusion, there are many unanswered questions regarding treatments for justice-involved Veterans. As we noted earlier, there are currently trials and program evaluation projects being conducted in VA to address some of these questions. However, there are many areas in which more research is needed and where important work can be conducted. For example, researchers could gather current information on prevalence rates and treatment needs, design and evaluate tailored treatments for justice-involved Veterans, and determine how best to implement these treatments.

Tables

	State prison, 2004		Federal prison, 2004		<u>Local jail, 1996</u>	
	Veterans	Non-Veterans	Veterans	Non-Veterans	Veterans	Non-Veterans
Gender						
Male	99%	93%	99%	92%	99%	89%
Female	1	7	1	8	2	11
Race/Hispanic origin						
White non-Hispanic	54%	33%	49%	24%	52%	35%
Black non-Hispanic	32	42	38	44	37	41
Hispanic	6	20	5	27	9	20
Other ¹	8	6	8	5	3	4
Age						
24 or younger	3%	19%	1%	10%	5%	34%
25-34	11	36	19	41	30	38
35-44	35	30	24	29	42	22
45-54	33	12	33	15	18	5
55 or older	18	4	22	5	6	1
Median	45 years	33 years	46 years	34 years	38 years	28 years
Marital status			·			
Married	22%	16%	25%	26%	21%	15%
Widowed	4	2	4	1	4	1
Divorced	43	17	44	18	35	13
Separated	6	5	6	5	13	8
Never married	26	60	22	50	28	63
Education completed						
8 th grade or less	3%	13%	2%	11%	4%	14%
Some high school	6	27	5	18	10	37
GED	30	35	22	34	22	19
High school graduate	29	16	30	17	28	18
Some college or more	33	10	42	20	37	13
U.S. Armed Services Branch ²						
Army	56%	-	56%	-	57%	-
Navy	22	-	17	-	20	-
, Marine Corps	14	-	18	-	15	-
Air Force	9	-	11	-	10	-
Coast Guard	1	-	1	-	0	-
Other ³	1	-	0	-	1	-
Mean length of military service	3.8 years	-	4.4 years	-	3.7 years	-

¹Excludes persons of Hispanic origin. Includes Asians, American Indians, Alaska Natives, Native Hawaiians, other Pacific Islanders, and inmates who specified more than one race.

²Adds to more than 100% because Veterans may have served in more than one branch of the U.S. Armed Forces.

³ Includes National Guard or reserve service in an unspecified branch of the U.S. Armed Forces.

Sources: Prison data: (adapted from Noonan & Mumola, 2007, Appendix Tables 1 and 3); Jail data: (adapted from Mumola, 2000, Tables 1 and 2)

	State prison, 2004		Federal prison, 2004		Local jail, 1996	
	Veterans	Non-Veterans	Veterans	Non-Veterans	Veterans	Non-Veteran
Type of offense						
Violent offenses	57%	47%	19%	14%	27%	26%
Homicide ¹	15	12	3	2	3	3
Sexual assault ²	23	9	3	1	6	3
Robbery	8	13	10	8	6	7
Assault	9	10	2	2	9	12
Other violent	3	2	0	1	2	2
Property offenses	16%	19%	11%	6%	25%	27%
Drug offenses	15%	22%	46%	56%	17%	23%
Public-order offenses	12%	12%	23%	20%	31%	23%
Other/unspecified	0%	0%	1%	3%	0%	0%
Mean maximum sentence length ³	147 months	119 months	138 months	127 months	13 months	12 months

Table 2. Offense Characteristics of Prisoners and Jail Inmates, By Veteran Status

¹Includes murder and manslaughter.

² Includes rape and other sexual assault.

³Excludes inmates who do not expect to be released.

Sources: Prison data: (adapted from Noonan & Mumola, 2007, Appendix Tables 4 and 8); Jail data: (adapted from Mumola, 2000, Tables 3 and 9)

Table 3. Prevalence of Mental Health and Medical Needs

Condition	Veterans	General/Non-Veterans	Is the sample comparable across Veterans and non-Veterans? ¹
General psychiatric problems			
Any psychiatric problems (past yr)	43-54% (prison) ^a	45-57% (prison) ^a	Yes
Any psychiatric services (past yr)	21-30% (prison) ^a	13-24% (prison) ^a	Yes
Any serious psychiatric diagnosis	Not available	Men: 17% (jail) ^b	N/A
(past month)		Women: 34% (jail) ^b	
Specific psychiatric diagnoses			
Clinical levels of depression ²	Not available	16-30% (past yr, jail/prison) ^c	N/A
Clinical levels of mania ³	Not available	35-55% (past yr, jail/prison) ^c	N/A
Psychosis symptoms	Not available	10-24% (past yr, jail/prison) ^c	N/A
Post-Traumatic Stress Disorder	39% (current, jail) ^d	Men: 21% (current, jail/prison) ^e	No
		Women: 22-48% (current,	
		jail/prison) ^{f,g}	
Antisocial Personality Disorder	7-11% (prison and unspecified	Men: 35-49% (jail, prison) ^{j,k}	No
	incarcerated) ^{h,i}	Women: 12-32% (jail, prison) ^I	
Medical problems			
ТВІ	Not available	25-87% (jail/prison) ^m	N/A
Any current medical problem	52-60% (in need of medical	37-44% (jail/prison)°	No
Physical impairment limiting activities	treatment) ⁿ Not available	24-36% (jail/prison)°	N/A

¹ Sample is comparable if samples of Veterans and non-Veterans came from the same population and the condition was assessed using the same process.

² The authors identified eight specific symptoms related to depression "persistent sad, numb or empty mood," "loss of interest of pleasure in activities," "increased or decreased appetite," "insomnia or hypersomnia," "psychomotor agitation or retardation," "feelings of worthlessness or excessive guilt," "diminished ability to concentrate or think," and "ever attempted suicide," which are consistent with the DSM-IV classification system.

³ The authors identified two specific symptoms related to mania that were assessed - "persistent anger or irritability" and "increased interest in sexual activity" - which are not sufficient to diagnose a manic episode and essentially fulfill one symptom of mania identified within the DSM-IV classification system. Thus, prevalence of symptoms of mania is artificially inflated.

Sources: ^a(Noonan & Mumola, 2007); ^b(Steadman et al., 2009); ^c(James & Glaze, 2006); ^d(Saxon et al., 2001); ^e(Powell et al., 1997); ^f(Teplin et al., 1996); ^g(Zlotnick, 1997); ^h(Erickson et al., 2008); ⁱ(Tsai et al., 2013c); ^j(Temporini, 2010); ^k(Black et al., 2010); ^l(Lewis, 2010); ^m(Centers for Disease Control, n.d.); ⁿ(Department of Veterans Affairs, 2012b); ^o(Maruschak, 2006, 2008)

Table 4. Prevalence of Substance Use Disorder Needs

Condition	Veterans	General/Non-Veterans	Is the sample comparable across Veterans and non-Veterans? ¹
Any Substance Use Disorder diagnosis	57-61% (prison)	56-67% (prison)	Yes
Alcohol Use Disorder diagnosis	36-43% (prison)	36-44% (prison)	Yes
Past month drug use	42-44% (jail/prison)	50-58% (jail/prison)	Yes
Past month marijuana use	26-29% (jail/prison)	33-42% (jail/prison)	Yes
Past month cocaine and/ or crack use	16-20% (jail/prison)	18-22% (jail/prison)	Yes
Past month stimulant use (including methamphetamines)	7-14% (jail/prison)	7-12% (jail/prison)	Yes
Past month use of heroin/ opiates	5-7% (jail/prison)	6-8% (jail/prison)	Yes
Past month use of depressants	1-5% (jail/prison)	4-5% (jail/prison)	Yes
Past month use of hallucinogens	2-3% (jail/prison)	3-6% (jail/prison)	Yes
Past month use of inhalants	1% (jail/prison)	1% (jail/prison)	Yes
Ever used IV drugs	17-24% (jail/prison)	11-17% (jail/prison)	Yes

¹ Sample is comparable if samples of Veterans and non-Veterans came from the same population and the condition was assessed using the same process. Sources: Jail data: (Mumola, 2000); Prison data: (Noonan & Mumola, 2007)

Table 5. Mental Health Assessment Tools Descriptive information Name of tool Descriptive information

General mental health screening and assessment tools

Screening tool: Global Appraisal of Individual Needs – Short Screener (GAIN- SS; Dennis et al., 2008)	<i>Description:</i> "The GAIN includes a set of instruments developed to provide screening and assessment of psychosocial issues related to mental and substance use disorders. The instruments emerged from clinical research protocols, including the Individual Assessment Profile (IAP) and the Client Assessment Profile (CAP) and are designed to assist in triage and referral, treatment planning, monitoring clinical progress and service utilization, and program evaluation. The GAIN has been revised frequently, and the most current format is version five. The GAIN instruments can be self-administered by paper and pencil or by computer, and can be administered via interview. A wide variety of software is available to score and interpret results of the GAIN instruments The GAIN-Short Screener includes 20 items and requires approximately 5 minutes to administer. Four subscales address internal disorders, behavioral disorders, substance use disorders, and crime and violence" (Peters et al., 2008, p. 58).
	<i>Time to complete:</i> 5 minutes (Peters et al., 2008).
	Evidence of reliability/validity with justice-involved populations?: No studies identified, but norms have been developed including adults from a drug treatment court and a re-entry program (Chestnut Health Systems, 2011).
Screening tool: Mental Health Screening Form-III (MHSF-III; Carroll & McGinley, 2001)	<i>Description:</i> "The MHSF-III was designed as an initial psychological screening for use with clients entering substance abuse treatment programs. The 18-item measure contains yes/no questions examining current and past mental health symptoms. Positive responses indicate the possibility of a current problem and should be followed up by questions regarding the duration, intensity, and co-occurrence of symptoms. The following disorders are addressed in the MHSF-III: schizophrenia, depressive disorders, posttraumatic stress disorder (PTSD), phobias, intermittent explosive disorder, delusional disorder, sexual and gender identity disorders, eating disorders, manic episode, panic disorder, obsessive-compulsive disorder, pathological gambling, learning disorders, and mental retardation. The preferred mode of administration is via interview, although the instrument can also be self-administered. A qualified mental health professional should review responses to determine whether a follow-up assessment and/or diagnostic workup and treatment recommendations are needed" (Peters et al., 2008, p. 67).

Evidence of reliability/validity with justice-involved populations?: No studies were identified (Peters et al., 2008).

Name of tool	Descriptive information
Screening tool: Correctional Mental Health Screen (CMHS; Ford et al., 2007)	<i>Description:</i> "The CMHS uses separate questionnaires for men and women. The version for women (CMHS–W) consists of 8 yes/no questions, and the version for men (CMHS–M) contains 12 yes/no questions about current and lifetime indications of serious mental disorder. Six questions regarding symptoms and history of mental illness are the same on both questionnaires; the remaining questions are unique to each gender screen. Each screen takes about 3–5 minutes to administer. It is recommended that male inmates who answer six or more questions 'yes' and female inmates who answer five or more questions 'yes' be referred for further evaluation" (Ford et al., 2007, p. 2).
	<i>Time to complete:</i> 3-5 minutes.
	Evidence of reliability/validity with justice-involved populations?: The versions for men and women each correctly classified at least 75% of jail detainees, according to subsequent clinical assessment (Ford et al., 2007).
Screening tool:	Description: "The BJMHS was derived from the Referral Decision Scale (RDS), which was designed to aid correctional staff in the
Brief Jail Mental Health Screen (BJMHS; Steadman et al., 2005)	identification of individuals who have severe mental disorders. In developing the screen, the total number of RDS items was reduced, several items were rephrased, and the assessed time span for symptom occurrence was changed from lifetime to the passix months. The BJMHS consists of six items that examine the occurrence of mental health symptoms and two items that review prior hospitalization for mental health problems and current use of psychotropic medication" (Peters et al., 2008, pp. 64-64).
	<i>Time to complete:</i> 5 minutes.
	Evidence of reliability/validity with justice-involved populations?: Yes, validity has been demonstrated in both men and women jail inmates (Peters et al., 2008; Steadman et al., 2007).
Assessment tool:	Description: "The PRISM is a semi-structured interview designed to address the problem of diagnosing psychopathology people
Psychiatric Research Interview for Substance and Mental Disorders (PRISM; Hasin et al., 1996)	who abuse substancesAs a result of the increasing recognition of the relevance of co-occurring mental and substance use disorders, DSM-IV emphasizes the importance of distinguishing between substance-induced psychiatric symptoms related to activ use and withdrawal, and "primary" psychiatric disorders. Since specific guidelines for these diagnostic decisions did not exist prior to DSM-IV, there were problems with reliability and validity of mental health diagnoses among people who abused substances. Th PRISM examines current and lifetime substance abuse and dependence, Axis I mental disorders, and borderline and antisocial personality disorders. The substance use sections are presented prior to other diagnostic sections. Therefore, the interviewer has the substance use history information available when assessing mental disorders" (Peters et al., 2008, p. 85).

Evidence of reliability/validity with justice-involved populations?: No studies were identified, and the screen has been little used with justice-involved populations (Peters et al., 2008).

Table 5. Mental Health Assessment Tools (continued)

Name of tool	Descriptive information
Assessment tool:	Description: "The MMPI is one of the most widely used objective personality tests throughout the world. The instrument has been
Minnesota Multiphasic Personality Inventory- 2 (MMPI-2; Butcher et al., 1989)	used in correctional settings since 1945 to classify individuals and to predict their behavior while incarcerated and after release. The instrument is a self-report measure with 567 items and 10 main clinical scales, including Hypochondriasis, Depression, Hysteria, Psychopathic Deviancy, Masculinity-Femininity, Paranoia, Psychasthenia (obsessive-compulsive features), Schizophrenia, Hypomania, and Social Introversion. The MMPI provides 15 supplementary content scales that address internal traits, external traits, and general problems. In addition, the MMPI contains six validity scales that examine response sets, including unanswered items, endorsement of uncommon items, and inconsistent responding.
	The MacAndrew Alcoholism Scale-Revised (MAC-R) was developed to differentiate alcoholic from nonalcoholic psychiatric patients. This supplementary scale on the MMPI-2 includes 49 items that provide a subtle screening measure to differentiate alcoholics from nonalcoholics. A 13-item Addiction Acknowledgment Scale was developed using items in the MMPI-2 whose content is clearly related to substance abuse. The Addiction Potential Scale was also developed, which included heterogeneous items related to extroversion, excitement seeking, risk taking, and lack of self-efficacy" (Peters et al., 2008, p. 87).
	<i>Time to complete:</i> 60-90 minutes.
	<i>Evidence of reliability/validity with justice-involved populations?:</i> "In a study of its validity in a prison setting, the test was slightly less likely to have produced valid profiles in women and African-Americans; but produced valid profiles in 79% of cases overall. The test [is] not an effective assessment with adults convicted of sex offenses" (Reentry Policy Council, 2012). Additionally, The MMPI-2 Criminal Justice and Correctional Report, provides guidance for interpreting results in justice-involved populations (Peters et al.,

2008).

Table 5. Mental Health Assessment Tools (continued)

Name of tool	Descriptive information
Assessment tool: Millon Clinical Multiaxial Inventory-III (MCMI-III; Millon, 1983)	Description: "The MCMI-III (Millon, 1983, 1997) is an objective, self-report psychological assessment measure consisting of 175 true/false items. The MCMI is designed to assess DSM-IV Axis II (personality) disorders and related clinical syndromes (Axis I), and is particularly useful in identifying personality disorders that may affect involvement in treatment. The Personality Inventory consists of 14 Personality Disorder Scales and 10 Clinical Syndrome Scales, both of which include separate Moderate and Severe Syndrome Scales. In addition, there are Correction Scales that help detect random responding and consist of three modifying indices (i.e., disclosure, desirability and debasement) and one validity index. The MCMI-III contains three Facet Scales for each MCMI-III Personality Scale. The Facet Scales were included to guide clinicians in the interpretation of the Clinical Personality Patterns and the Severe Personality Pathology Scales and were developed using factor analytic techniques. The scales aid in identifying the specific personality processes (e.g., self-image, interpersonal conduct, cognitive style) that contribute to overall scale elevations" (Peters et
	 al., 2008, pp. 88-89). <i>Time to complete:</i> 25 minutes (Peters et al., 2008). <i>Evidence of reliability/validity with justice-involved populations?:</i> It was found to correspond generally with a variety of outcomes (e.g., mental health and substance use) in a correctional sample, though it may underreport personality disorders (Retzlaff, Stoner, & Kleinsasser, 2002). Additionally, the developers provide norms for justice-involved populations, as well as separate interpretive guidance (Peters et al., 2008).
Assessment tool: Personality Assessment Inventory (PAI; Morey, 1991)	<i>Description:</i> "The PAI is a self-administered objective test of personality and psychopathology developed to provide information related to treatment planning and evaluation [It] has received considerable attention by clinicians and researchers because of its rigorous methodology. The development of the PAI was based on a construct validation framework that emphasized a rational, as well as quantitative method of scale development. A strong emphasis is placed on a theoretically informed approach to the development and selection of items. Key areas examined by the PAI include: response styles, clinical syndromes, interpersonal style, treatment complications, and subject's environment. The instrument comprises 344 items and 22 non-overlapping full scales, including 4 validity scales, 11 clinical scales, 5 treatment consideration scales, and 2 interpersonal scales. Clinical scales include separate measures for alcohol problems, drug problems, somatic complaints, anxiety-related disorders, depression, mania, paranoia, schizophrenia, borderline personality disorder, and antisocial personality disorder" (Peters et al., 2008, p. 90).
	<i>Time to complete:</i> Up to 2.5 hours (Peters et al., 2008).
	Fuidence of valiability (validity with insting involved new lations). Yes, they she can a second she when the valatively validity of

Evidence of reliability/validity with justice-involved populations?: Yes, though some concerns about the relatively weak validity of the SUD subscale (Reentry Policy Council, 2012).

Descriptive information

Substance use disorder screening and assessment tools

Screening tool: Simple Screening Instrument (SSI; Winters & Zenilman, 1994)	<i>Description:</i> "The SSI is a 16-item screening instrument that examines symptoms of alcohol and drug dependence experienced during the past six months. The instrument was developed by the Center for Substance Abuse Treatment (CSAT) through selection of items from eight existing screening instruments, and from the DSM-III-R. The SSI examines five different `domains' related to substance dependence, including: (1) alcohol and/or drug consumption, (2) preoccupation and loss of control, (3) adverse consequences, (4) problem recognition, and (5) tolerance and withdrawal. The SSI can be self-administered or provided through an interview" (Peters et al., 2008, p. 81).
	Time to complete: Unspecified.
	Evidence of reliability/validity with justice-involved populations?: Yes, good results in several samples of justice-involved adults (Peters et al., 2008).
Screening tool: Texas Christian University Drug Screen-II (TCUDS-II; Simpson & Knight, 2012)	<i>Description:</i> "The TCUDS-II is a 15-item public domain instrument derived from a substance abuse diagnostic instrument (Brief Background Assessment–Drug-Related Problems section) developed by the Texas Christian University, Institute of Behavioral Research as part of an intake assessment for the DATAR project, a NIDA-funded initiative evaluating the effectiveness of new treatment interventions. The TCUDS-II provides a self-report measure of substance use problems within the past 12 months, and is based on DSM criteria. The instrument provides a brief screen for frequency of substance use, history of treatment, substance dependence, and motivation for treatment. A score of three or higher on the TCUDS-II indicates significant substance abuse problems" (Peters et al., 2008, p. 82).
	<i>Time to complete:</i> 5-10 minutes (Reentry Policy Council, 2012).

Evidence of reliability/validity with justice-involved populations?: Yes, in several samples of justice-involved adults (Peters et al., 2008).

Table 5. Mental Health Assessment Tools (continued)

Name of tool	Descriptive information
Assessment tool:	Description: "The ASI is one of the most widely used substance abuse instruments for screening, assessment, and treatment
Addiction Severity Index – Fifth Version (ASI-V5; McLellan et al., 1992)	planning. The 155-item instrument was designed as a structured interview to examine alcohol and drug dependence, the frequency of use, and other psychosocial areas that have been affected by using substances The ASI includes seven subscales that examine areas of functioning commonly affected by substance abuse, including drug and alcohol use, family and social relationships, employment and support status, and mental health status. The ASI also reviews indicators of emotional, physical, and sexual abuse. The ASI measures frequency of use but does not address quantity of use, as quantity may be underestimated and frequency is easier to recall" (Peters et al., 2008, p. 93).
	<i>Time to complete:</i> 30-45 minutes (Reentry Policy Council, 2012).
	Evidence of reliability/validity with justice-involved populations?: Yes, and normative data is available for justice-involved adults (Peters et al., 2008).
Screening tool:	Description: "[The ASSIST] is relatively brief, comprising eight questions or items, covering 10 substances: tobacco, alcohol,
The Alcohol, Smoking, and Substance	cannabis, cocaine, amphetamine-type stimulants (ATS), inhalants, sedatives, hallucinogens, opioids and 'other drugs'. [It] investigates frequency of use and associated problems for each substance" (Humeniuk et al., 2008).
Involvement Screening	<i>Time to complete:</i> 7- 10 minutes (Humeniuk et al., 2008).
Test (ASSIST; Humeniuk et al., 2008)	Evidence of reliability/validity with justice-involved populations?: No studies were identified.

Trauma/PTSD screening tools

Screening tool: Impact of Events Scale-Revised (IES-R; Horowitz et al., 1979;	<i>Description:</i> "The IES-R is a 22-item self-report measure that assesses subjective distress caused by traumatic events. It is a revised version of the older version, the 15-item IES (Horowitz et al., 1979). The IES-R contains 7 additional items related to the hyperarousal symptoms of PTSD, which were not included in the original IES. Items correspond directly to 14 of the 17 DSM-IV symptoms of PTSD. Respondents are asked to identify a specific stressful life event and then indicate how much they were distressed or bothered during the past seven days by each "difficulty" listed" (Weiss & Marmar, 1996).
Weiss & Marmar, 1996)	Time to complete: Unspecified.

Evidence of reliability/validity with justice-involved populations?: No studies were identified (Peters et al., 2008).

Name of tool	Descriptive information
Screening tool:	Description: "The TSI is a 100-item self-report inventory that evaluates the presence of acute and chronic trauma symptoms [It] contains 10 clinical scales that examine affective, cognitive, and physical issues. Three validity scales are included to detect efforts
The Trauma Symptom	to either underreport or exaggerate symptoms. An alternative version (TSI-A) examines sexual issues. Separate norms are availabl
Inventory (TSI; Briere, 1995)	for men and women, as well as for different age groups" (Peters et al., 2008, p. 47).
	<i>Time to complete:</i> 20 minutes (Peters et al., 2008).
	Evidence of reliability/validity with justice-involved populations?: No studies were identified (Peters et al., 2008).
Screening tool:	Description: "The CAPS is a structured, clinician-administered interview that assesses PTSD diagnostic criteria. The instrument was developed to enhance the validity and reliability of PTSD diagnoses by rating the frequency and intensity of each of the 17 DSM-IV
The Clinician-	TR PTSD symptoms. The CAPS examines each of the three symptom clusters of PTSD (avoidance, arousal, and re-experiencing), as
Administered PTSD	well as the total range of symptoms. The CAPS is a more comprehensive and valid approach than a brief screen to identify PTSD"
Scale for DSM-IV	(Peters et al., 2008, p. 48).
(CAPS; Blake et al.,	
1998)	Time to complete: Unspecified.
	Evidence of reliability/validity with justice-involved populations?: No studies were identified (Peters et al., 2008).
Screening tool:	Description: "The PCL is a 17-item self-report measure reflecting DSM-IV symptoms of PTSD. The PCL has a variety of clinical and
PTSD Checklist (PCL;	research purposes, including: screening individuals for PTSD, aiding in diagnostic assessment of PTSD, [and] monitoring change in PTSD symptoms "Versions of the PCL include the PCL M (military) PCL C (siviliar) and PCL S (specific). The PCL has been validate
Weathers et al., 1993)	PTSD symptoms." Versions of the PCL include the PCL-M (military), PCL-C (civilian), and PCL-S (specific). The PCL has been validate in various populations including Veterans (National Center for PTSD, 2012).
	Time to complete: 5-10 minutes (National Center for PTSD, 2012).
	<i>Evidence of reliability/validity with justice-involved populations?:</i> No studies were identified.

Table 5. Mental Health Assessment Tools (continued)

Table 6. Criminogenic Risk Assessment Tools

Name of tool	Descriptive information
The Correctional	Description: "[CAIS is] designed to provide criminal justice personnel with integrated assessment tools which identify evidence-
Assessment and	based supervision strategies that emphasize public safety, rehabilitation, accountability, and criminogenic needs. CAIS™employ[s]
Intervention System (CAIS;	a single semi-structured interview to derive assessments of risk, strengths, and needs. The results of the interview are scored by an
National Council on Crime	automated response system which produces an individualized case plan including risk, needs, and supervision strategy
& Delinquency, n.d.)	classifications, as well as recommendations for evidence-based programs and services" (Reentry Policy Council, 2012).
	Time to complete: Unspecified.
	<i>Evidence of reliability/validity?: "</i> The CAIS's risk scores have been shown to predict recidivism in two states. More importantly, use of the CAIS has been shown to reduce recidivism" (Skeem & Eno Louden, 2007, p. 30).
Correctional Offender Management Profiling for Alternative Sanctions (COMPAS; Northpointe, n.d.)	<i>Description:</i> "[COMPAS] is a statistically based risk and needs assessment specifically designed to assess key risk and needs factors in adult and youth correctional populations and to provide decision-support for justice professionals who must make decisions regarding the placement, supervision, and case-management of individuals in community supervision and correctional institution settings. It achieves this by providing valid measurement and succinct organization of research supported risk/need dimensions. COMPAS scores each individual based on three different types of risk (violence, recidivism, and failure to appear in court) and 19 different criminogenic needs. The software also includes case planning, outcomes measurement, and reports generation modules" (Reentry Policy Council, 2012).
	Time to complete: Unspecified.
	Evidence of reliability/validity?: At least two studies have shown reliability and predictive validity at least as good as other prominent risk assessment tools (Blomberg, Bales, Mann, Meldrum, & Nedelec, 2010; Brennan, Dieterich, & Ehret, 2009).
The Offender Intake Assessment (OIA; Motiuk, 1997)	Description: "OIA is a comprehensive and integrated evaluation of the offender at the time of admission to the federal system. It involves the collection and analysis of information on each offender's criminal and mental health history, social situation, education and other factors relevant to determining criminal risk and identifying offender needs. This provides a basis for determining the offender's institutional placement and for establishing his or her correctional plan" (Motiuk, 1997).
	<i>Time to complete:</i> Unspecified.
	Evidence of reliability/validity?: Predictive validity has been shown with re-assessment using this tool (Andrews et al., 2006).

Name of tool	Descriptive information						
The Level of Service/Case	Description: "The Level of Service/Case Management Inventory (LS/CMI) is an assessment that measures the risk and need factors						
Management Inventory (LS/CMI; Andrews et al., 2004).	of late adolescent and adult offenders. The LS/CMI is also a fully functioning case management tool. This single application provides all the essential tools needed to aid professionals in the treatment planning and management of offenders in justice, forensic, correctional, prevention and related agencies.						
	Developed to reflect the increasing knowledge base on offender risk assessment since the Level of Service Inventory–Revised (LSI- R™), LS/CMI has refined and combined the 54 LSI-R items into 43 items in Section 1. In addition 10 comprehensive sections have been incorporated to further assist public safety professionals in their analysis of offender management" (Andrews et al., 2004).						
	<i>Time to complete:</i> Unspecified.						
	Evidence of reliability/validity?: Meta-analyses have demonstrated consistent predictive validity of the LS/CMI as well as the earlier LSI-R, with r-values from 0.36 to 0.41 for general recidivism (Andrews et al., 2006).						
Ohio Risk Assessment System (ORAS; Latessa et al., 2010)	<i>Description:</i> "In collaboration with the Ohio Department of Rehabilitation and Corrections, researchers at the University of Cincinnati (led by Dr. Ed Latessa) developed the Ohio Risk Assessment System (ORAS), which assesses individuals at several points in the criminal justice system. Ohio developed ORAS with two specific goals in mind: first, to promote consistent and objective assessment of risk throughout the criminal justice system; and second, to improve communication and avoid duplication of information from one system point to the next.						
	Five assessment instruments were created [ranging from 4 to 35 items each, and developed through assessment of over 200 possible risk factors]: Pretrial Assessment Tool, Community Supervision Screening Tool, Community Supervision Tool, Prison Intake Tool, and Reentry Tool" (Vera Institute of Justice, 2011).						
	Time to complete: Unspecified.						
	<i>Evidence of reliability/validity?:</i> Predictive validity has been demonstrated for each of the instruments, with <i>r</i> -values from 0.22 to 0.44 for predicting re-arrest (Latessa et al., 2010).						

Name of tool	Descriptive information						
Hare Psychopothy	Description: "The Psychopathy Checklist Revised (PCL-R) is a 20-item, interview-based instrument that measures psychopathic						
Checklist – Revised (PCL-	attributes in individuals. Clinicians score each item on a scale of 0 (not present) to 2 (definitely present). The instrument measure						
R; Hare, 1999)	two major factors that are correlated with psychopathy: a disregard for the feelings and rights of others, and the presence of						
	persistent antisocial behavior" (Reentry Policy Council, 2012).						
	Time to complete: 1-2 hours to complete and score (Reentry Policy Council, 2012).						
	<i>Evidence of reliability/validity?:</i> "The instrument has been validated with adult males in institutional and community corrections settings, and its reliability has been established with women who are incarcerated. The instrument's developer strongly cautions that, because the label of psychopathy can have lasting effects in an individual's life, the PCL-R should only be used by trained mental health clinicians and with populations with which the instrument has been validated" (Reentry Policy Council, 2012).						

Table 7. SAMHSA's GAINS Center – Treatments For the General Mental Health Needs Of Justice-Involved Adults

Treatment	Description							
Evidence-Based Practices								
Cognitive Behavioral	A therapeutic approach that attempts to solve problems resulting from dysfunctional thoughts,							
Therapy (CBT) ¹	moods, or behavior through brief, direct, and time-limited structured counseling.							
Motivational Interviewing ²	A consumer-centered, directive method for enhancing intrinsic motivation to change by							
	exploring and resolving ambivalence.							
Promising Practices								
Cognitive Behavioral	CBT interventions that are designed to address criminogenic risks and may focus on anger							
Treatment Targeted to	management, problem-solving, and assuming personal responsibility for behavior.							
Criminogenic Risks (e.g.,								
Reasoning and								
Rehabilitation, Thinking								
for a Change, or Moral								
Reconation Therapy) ³								
Forensic Peer Specialists ⁴	Justice-involved clients who are in recovery provide support to other clients who are also							
	involved, or at risk of becoming involved, in the criminal justice system.							
Evidence-Based Programs	, , , , ,							
Assertive Community	Treatment coordinated by a multidisciplinary team with high staff-to-client ratios that assumes							
Treatment (ACT) ⁵	around-the-clock responsibility for clients' case management and treatment needs.							
Illness Management and	An approach that involves teaching clients skills and techniques to minimize the interference of							
Recovery (IMR) ⁶	psychiatric symptoms in their daily lives.							
Integrated Mental Health	Treatment and service provision to support recovery from co-occurring mental illness and							
and Substance Abuse	substance abuse through a single agency or entity.							
Services ⁷								
Supported Employment ⁸	An EBP for people with severe developmental, mental, and physical disabilities that matches							
	them with and trains them for jobs where their specific skills and abilities make them valuable							
	assets to employers.							
Psychopharmacology	Treatment that uses one or more medications (e.g., antidepressants) to reduce depression,							
-/	psychosis, or anxiety by acting on the chemistry of the brain.							
Promising Programs								
Supportive Housing ⁹	A system of professional and/or peer supports that allows a person with mental illness to live							
	independently in the community. Supports may include regular staff contact and the availability							
	of crisis services or other services to prevent relapse, such as those focusing on mental health,							
	substance abuse, and employment.							
Forensic ACT (FACT) ⁵	ACT-like programs that have been adapted for people involved in the criminal justice system and							
	focus on preventing arrest and incarceration. ACT involves treatment coordinated by a							
	multidisciplinary team with high staff-to-client ratios that assumes around-the-clock							
	responsibility for clients' case management and treatment needs.							
Forensic Intensive Case	Like FACT, FICM involves the coordination of services to help clients sustain recovery in the							
Management (FICM) ⁵	community and prevent further involvement with the criminal justice system. Unlike FACT, FICM							
	uses case managers with individual caseloads as opposed to a self-contained team.							
¹ For more information on Cognitive	Behavioral Therapy, visit <u>http://gainscenter.samhsa.gov/cms-assets/documents/69181-</u>							

For more information on Cognitive Behavioral Therapy, visit <u>http://gainscenter.samhsa.gov/cms-assets/documents/69181-</u> 899513.rottercarr2010.pdf

² For more information on Motivational Interviewing, visit <u>http://gainscenter.samhsa.gov/pdfs/ebp/Motivational Interviewing2011.pdf</u>

³ For more information on specific Cognitive Behavioral Therapies, visit <u>http://static.nicic.gov/Library/021657.pdf</u>

⁵ For more information on ACT, FACT, and FICM, visit <u>http://gainscenter.samhsa.gov/pdfs/ebp/ExtendingAssertiveCommunity.pdf</u>

⁶ For more information on IMR, visit <u>http://gainscenter.samhsa.gov/pdfs/ebp/IllnessManagement.pdf</u>

⁷ For more information on Integrated Mental Health and Substance Abuse Services, visit <u>http://store.samhsa.gov/product/Integrated-Treatment-for-Co-Occurring-Disorders-Evidence-Based-Practices-EBP-KIT/SMA08-4367</u> and

http://gainscenter.samhsa.gov/pdfs/ebp/IntegratingMentalHealth.pdf

⁸ For more information on Supported Employment, visit <u>http://store.samhsa.gov/product/Supported-Employment-Evidence-Based-Practices-EBP-</u> <u>KIT/SMA08-4365</u>

Source: (adapted from Blandford & Osher, 2012, pp. 5-6)

⁴ For more information on Forensic Peer Specialists, visit <u>http://gainscenter.samhsa.gov/peer_resources/pdfs/Davidson_Rowe_Peersupport.pdf</u>

Table 8. Washington State Institute for Public Policy - Adult Corrections: What Works?

Table 8. Washington State Institute for Public Policy - Adult Correct	Change in recidivism rate	Number of evaluations
Programs for Drug-Involved Offenders		
Adult drug courts	-10.70%	56
In-prison "therapeutic communities" with community aftercare	-6.90%	6
In-prison "therapeutic communities" without community aftercare	-5.30%	7
Cognitive-behavioral drug treatment in prison	-6.80%	8
Drug treatment in the community	-12.40%	5
Drug treatment in jail	-6.00%	5
Programs for Offenders With Co-Occurring Disorders		
Jail diversion (pre- and post-booking programs)	0.00%	11
Programs for the General Offender Population		
General and specific cognitive-behavioral treatment programs	-8.20%	25
Programs for Domestic Violence Offenders		
Educational/cognitive-behavioral treatment	0.00%	9
Programs for Sex Offenders		
Psychotherapy for sex offenders	0.00%	3
Cognitive-behavioral treatment in prison	-14.90%	5
Cognitive-behavioral treatment in the community	-31.20%	6
Behavioral therapy for sex offenders	0.00%	2
Intermediate Sanctions		
Intensive supervision: surveillance-oriented programs	0.00%	24
Intensive supervision: treatment-oriented programs	-21.90%	10
Adult boot camps	0.00%	22
Electronic monitoring	0.00%	12
Restorative justice programs for lower-risk adult offenders	0.00%	6
Work and Education Programs for the General Offender Population		
Jail diversion (pre- and post-booking programs)	-7.80%	4
Basic adult education programs in prison	-5.10%	7
Employment training and job assistance in the community	-4.80%	16
Vocational education in prison	-12.60%	3
Program Areas in Need of Additional Research & Development (The		
following types of programs require additional research before it can be		
concluded that they do or do not reduce adult recidivism rates)		
Case management in the community for drug offenders	0.00%	12
"Therapeutic community" programs for mentally ill offenders	-27.40%	2
Faith-based programs	0.00%	5
Domestic violence courts	0.00%	2
Intensive supervision of sex offenders in the community	0.00%	4
Mixed treatment of sex offenders in the community	0.00%	2
Medical treatment of sex offenders	0.00%	1
COSA (faith-based supervision of sex offenders)	-31.60%	1
Regular parole supervision vs. no parole supervision	0.00%	1
Day fines (compared to standard probation)	0.00%	1
Work release programs	-5.60%	4

Note. Example of how to read the table: an analysis of 56 adult drug court evaluations indicates that drug courts achieve, on average, a statistically significant 10.7% percent reduction in the recidivism rates of program participants compared with a treatment-as-usual group.

Source: (adapted from Aos et al., 2006, Exhibit 1)

Steps 1 and 2: Client must demonstrate honesty and trust.

Step 3: Client must accept rules, procedures, treatment requirements, and other people.

Step 4: Client builds genuine self-awareness.

Step 5: Client creates a written summary to deal with relationships that have been damaged because of substance abuse or other antisocial behavior.

Step 6: Client begins to uncover the right things to do to address the causes of unhappiness.

Step 7: Client sets goals.

Step 8: Client refines goals into a plan of action.

Step 9: Client must continue to meet timetables he or she set up.

Step 10: Client conducts a moral assessment of all elements of his or her life.

Step 11: Client reassesses relationships and forms a plan to heal damage to them.

Step 12: Client sets new goals, for 1 year, 5 years, and 10 years, with a focus on how accomplishment of the goals will relate to happiness.

Steps 13–16 (optional): Involves client's confrontation of the self with a focus on an awareness of self. Goals continue to be defined and expanded to include the welfare of others.

Source: (adapted from Milkman & Wanberg, 2007)

Study reference, country	Study design	Sample size	Treatment setting	Planned duration	Was participation voluntary?	Specific population? ²	Recidivism outcome summary Positive, Negative, Mixed/Non- significant ³
evel 1. Correlation betw	veen a crime prevent	ion program	and a measure o	of crime or cr	ime risk factors a	t a single point in	time.
(Sandhu, 1998), USA	Single-group	266	Community (therapeutic community)	4.5 months		SUD sample	N/A (single group, one point in time).
			community)				Over 18 months, MRT participants had a 2.3-3.2% rate of recidivism (re conviction).
(Sandhu, 1999), USA	Single-group	19	Community	3-12 months		SUD sample	N/A (single group, one point in time).
							Over 1 year, MRT completers had a 0% rate of recidivism (re-arrest).

Level 2. Temporal sequence between the program and the crime or risk outcome clearly observed, or the presence of a comparison group without demonstrated comparability to the treatment group.

("Anchorage wellness court issues outcome report: Native Alaskans successfully treated," 2004), USA	Unspecified comparison group	109	Community	 	SUD sample	N/A (no statistical tests reported). Over unspecified time frame, MRT group had a 44% (in 2001) and 68% (in 2002) reduction in recidivism (re- arrest) rates compared to the control group.
(Black, 2000), USA	Single-group (pre- post test)	60	Community (residential restitution center)	 No		Positive MRT effect. Over 1 year, MRT group had a 53% reduction in the number of rule violations compared to pre- treatment.

Study reference, country	Study design	Sample size	Treatment setting	Planned duration	Was participation voluntary?	Specific population? ²	Recidivism outcome summary Positive, Negative, Mixed/Non- significant ³
(Burnette et al., 2004), USA	Non-equivalent comparison group (national sample comparison group)	84	Prison		Yes	SUD sample, women sample	N/A (no statistical tests reported). Over 26 months, MRT group had an 85% reduction in recidivism (re- arrest) rates compared to a national sample.
(Burnette, Prachniak, Leonard et al., 2005), USA	Non-equivalent comparison group (national sample comparison group)	180	Community		Yes	SUD sample, women sample	N/A (no statistical tests reported). Over 21-24 months, MRT group had a 69% reduction in recidivism (re- arrest) rates compared to a national sample.
(Burnette, Prachniak, Swan et al., 2005), USA	Non-equivalent comparison group (state sample comparison group)	135	Prison (therapeutic community)			SUD sample	N/A (no statistical tests reported). Over 21.5 months, MRT group had 30% reduction in recidivism (re- arrest) rates compared to a state sample.
(Fann & Stapleton, 1995), USA	Non-equivalent comparison group (state sample comparison group)	72	Community			SUD sample	N/A (no statistical tests reported). Over 18 months, MRT group had a 63% reduction in recidivism (re- arrest) rates compared to Tennesse Prison sample.
(Fann & Watson, 1999), USA	Treatment completers vs. non- completers	64	Community			IPV sample	N/A (no statistical tests reported). Over an unspecified time frame, MRT group completers had a 79% reduction in recidivism (re-arrest) rates compared to non-completers

Study reference, country	Study design	Sample size	Treatment setting	Planned duration	Was participation voluntary?	Specific population? ²	Recidivism outcome summary Positive, Negative, Mixed/Non- significant ³
(Finn, 1998), USA	Mixed, some randomized to MRT or control, some compared to a state sample	826	Prison (therapeutic community)		Yes	Women included as a subgroup	Non-significant MRT effect. Over 1 year, MRT group had a 28% reduction in recidivism (pending charge, misdemeanor, or felony conviction) rates compared to the comparison group.
(Fuller, 2003), USA	Treatment completers vs. non- completers	72	Community			SUD sample, women included as a sub-sample	Non-significant MRT effect. Over 1 year, MRT group completers had a 51% reduction in recidivism (re-arrest) rates compared to non- completers.
(Gilreath, 1995), USA	Single-group (pre- post test)	187	Community (therapeutic community)	4 weeks	Yes	SUD sample, women sample	N/A (no recidivism outcomes reported).
(Godwin, Stone, & Hambrock, 1995), USA	Non-equivalent comparison group	5217	Jail		Yes	SUD sample	Positive MRT effect. Over 2 years, MRT group had a 32% reduction in recidivism (return to facility for any reason) rates compared to control group.
(Grandberry, 1998), USA	Non-equivalent comparison group	210	Community				Mixed MRT effect. Over 1 year, MRT group had a 10% increase in recidivism (re-arrest) rates compared to control group. However, MRT group committed fewer offenses per arrest and their crimes were less severe.

Study reference, country	Study design	Sample size	Treatment setting	Planned duration	Was participation voluntary?	Specific population? ²	Recidivism outcome summary Positive, Negative, Mixed/Non- significant ³
(Huddleston, 1996), USA	Non-equivalent comparison group	198	Community	15 months		SUD sample	Positive MRT effect. Over 3 years, MRT group had a 639 reduction in recidivism (re- conviction) rates compared to the comparison group.
(Huffman, 2005), USA	Treatment completers vs. non- completers	92	Community			SUD sample	N/A (no statistical tests reported). Over 2 years, MRT completers had an 80% reduction in recidivism (re- arrest) rates compared to non- completers.
(Kirchner & Kirchner, 2008), USA	Non-equivalent comparison group	121	Community			SUD sample	Non-significant MRT effect. Over unspecified time frame, MRT completers had a 12% reduction in recidivism (not indicated) rates compared to non-completers.
(Krueger, 1993), USA	Non-equivalent comparison group	184	Jail		Yes		Positive MRT effect. Over 4 years, MRT completers had 33% reduction in recidivism (re- arrest) rates compared to the comparison group.
(Leonardson, 2000), USA	Treatment completers vs. non- completers	175	Community	26 weeks	Mixed	IPV sample	N/A (no statistical tests reported). Over 2 years, MRT completers had 25% reduction in recidivism (re- arrest) rates compared to non- completers.

Study reference, country	Study design	Sample size	Treatment setting	Planned duration	Was participation voluntary?	Specific population? ²	Recidivism outcome summary Positive, Negative, Mixed/Non- significant ³
(Lindholm, 1998), USA	Single-group (pre- post test)	12	Community (residential restitution center)	5 months			Positive MRT effect. MRT participants had an 80% reduction in number of rule violations per week at post- treatment compared to pre- treatment.
(Little, Baker, McCarthy, Davison, & Urbaniak, 2010), USA	Non-equivalent comparison group	2103	Community			SUD (DWI) sample, women included as a subgroup	Non-significant MRT effect. Over 2 years, MRT group had an 119 reduction in DUI recidivism (re- arrest) rates compared to the comparison group.
(Schlarb, 2010), USA	Single-group (pre- post test)	156	Community			Women included as a subgroup	Positive MRT effect. MRT participants had a significant (though unspecified) reduction in risk of recidivism, as measured by the LSI-R, at post-treatment compared to pre-treatment.
el 3. A comparison be	tween two or more co	omparable u	units of analysis,	one with and	d one without th	e program.	
(Little, Robinson, & Burnette, 1991), USA	Sequential cohorts, based on funding	1388	Prison		Yes	SUD sample	Positive MRT effect. Over 20 years, MRT group had a 269 reduction in recidivism (re-arrest) rates compared to the comparison

group.

	lon merapy studies (c	Jonunueuj					
Study reference, country	Study design	Sample size	Treatment setting	Planned duration	Was participation voluntary?	Specific population? ²	Recidivism outcome summary Positive, Negative, Mixed/Non- significant ³
(Little & Robinson, 1989), USA	Sequential cohorts, based on funding	180	Prison (therapeutic community)		Yes	SUD (DWI) sample	Positive MRT effect. Over 1 year, MRT group had 28% reduction in recidivism (re-arrest) rates compared to the comparison group. Over 10 years, MRT group had a 13% reduction in recidivism rates compared to the comparison group.

Level 4. Comparison between multiple units with and without the program, controlling for other factors, or using comparison units that evidence only minor differences.

(Anderson, 2002),	Matched	2374	Community	 No	 Positive MRT effect.
USA	comparison group				Over 3 years, MRT group had a 33% reduction in recidivism (re- incarceration) rates compared to the comparison group.
(Boston, 2001),	Matched	136	Community	 Yes	 Positive MRT effect.
USA	comparison group				Over 6 months, MRT group had a 57% reduction in recidivism (re- arrest) rates compared to the comparison group.
(Brame,	Matched	68765	Mixed	 No	 Positive MRT effect.
MacKenzie, Waggoner, & Robinson, 1996), USA	comparison group		(prisons, community)		Over an unspecified time frame, MRT group had an unspecified but significant reduction in recidivism (re-incarceration) rates compared to the comparison group.

Study reference, country	Study design	Sample size	Treatment setting	Planned duration	Was participation voluntary?	Specific population? ²	Recidivism outcome summary Positive, Negative, Mixed/Non- significant ³
(Burnett, 1997), USA	Matched comparison group	60	Community				Positive MRT effect. Over 1 year, MRT group had a 50% reduction in recidivism (re-arrest) rates compared to the comparison group.

Level 5. Random assignment and analysis of comparable units to program and comparison groups.

No fully randomized studies were identified.

¹ The studies are organized according to the Maryland Scale of Scientific Methods, with Level 1 being the weakest design and Level 5 the strongest (Sherman et al., 1998). ² This column identifies studies where the samples were explicitly limited to a particular population (except where a subgroup of women was specifically examined). Notably, a significant portion of the participants in most of these trials likely met criteria for a SUD, but SUD samples are only noted here when the treatment was explicitly targeted only to adults with a SUD.

³ Positive = MRT participants demonstrated a significant reduction in recidivism, with no tests showing a significant increase in recidivism; Negative = MRT participants demonstrated a significant increase in recidivism, with no tests showing a significant reduction in recidivism; Mixed/Non-significant = significance tests on recidivism outcomes showed no significant change for MRT participants, or showed conflicting results. *Note.* Report of follow-up data on recidivism rates varies across studies and does not always indicate end of treatment (e.g., treatment ends and measurement of recidivism begins).

Table 11. Cognitive Centre of Canada - Reasoning and Rehabilitation Program Components

Self-Control: to stop and think before they act; to consider all the consequences before making decisions.

Meta-Cognition: to realize that how they think determines what they think, how they feel and how they behave.

Critical Reasoning: how to think objectively and rationally without distorting the facts or externalizing blame.

Social Skills: skills which help achieve positive reinforcement rather than rejection in social situations.

Interpersonal Cognitive Problem-Solving Skills: analyzing interpersonal problems, understanding and considering other people's values, behavior and feelings; recognizing how their behavior affects other people.

Creative Thinking: considering alternative, prosocial rather than antisocial ways of responding to problems.

Social Perspective-taking: considering other people's views, feelings and thoughts - the basis of empathy.

Values Enhancement: developing beyond egocentric world view to a consideration of the needs of others.

Emotional Management: skills for the management of anger and other emotions.

Source: (adapted from Cognitive Centre of Canada, n.d.)

Table 12. Reasoning and Rehabilitation Studies¹

Study reference,	Study design	Sample	Treatment	Planned	Was	Specific	Recidivism outcome summary
country		size	setting	duration	participation	population? ²	Positive, Negative, Mixed/Non-
					voluntary?		significant ³

Level 1. Correlation between a crime prevention program and a measure of crime or crime risk factors at a single point in time.

No single group studies were identified.

Level 2. Temporal sequence between the program and the crime or risk outcome clearly observed, or the presence of a comparison group without demonstrated comparability to the treatment group.

(Clarke et al., 2010), UK	Non-equivalent comparison group	32	Forensic psychiatric hospital units		Voluntary	Psychiatric disorder sample	N/A (no recidivism outcomes reported).
(Palmer et al., 2007), UK	Unspecified comparison group	6479	Community				Positive R&R effect. Over a mean of 683 days, R&R completers had a 10% reduction in reconviction rates compared to comparison group.
(Raynor & Vanstone, 1996), UK	Non-equivalent comparison group	655	Community				N/A (no statistical tests reported). Over 1 year, R&R group had a 10% reduction in recidivism (re- conviction) compared to the comparison group, but there was no difference at the 2-year follow- up.
(Ross, Fabiano, & Ewles, 1988), Canada	Non-equivalent comparison group	45	Community	18 months			N/A (no statistical tests reported). Over 9 months, the R&R group had a 74% reduction in recidivism (re- conviction) compared to the comparison group.

Study reference, country	Study design	Sample size	Treatment setting	Planned duration	Was participation voluntary?	Specific population? ²	Recidivism outcome summary Positive, Negative, Mixed/Non- significant ³
(Wilkinson, 2005), UK	Non-equivalent comparison group	185	Community				Non-significant R&R effect. Over 2 years, R&R completers had a 12% reduction in recidivism (re- conviction) compared to comparison group.
(Tarallo, 2011), USA	Treatment completers vs. non- completers	855	Community			Women subgroup	N/A (no recidivism outcomes reported).
.evel 3. A comparison b	etween two or more co	omparable	units of analysis,	one with and	l one without the	e program.	
(Rees-Jones et al., 2012), UK	Sequential cohorts, based on space	121	Forensic psychiatric hospital units		Yes	Psychiatric disorder sample	N/A (no recidivism outcomes reported).
(Wilson & Davis, 2006), USA	Sequential cohorts, based on program space	735	Prison	8 weeks	No		Negative R&R effect. Over 1 year MRT group had a 35% increase in recidivism (re-arrest) rates compared to the compariso group.
(Young et al., 2010), UK	Sequential cohorts, unspecified	70	Forensic psychiatric hospital units	16 weeks	Yes	Violent offender sample, psychiatric disorder sample.	N/A (no recidivism outcomes reported).
(Young et al., 2012), UK	Sequential cohorts, unspecified	31	Prison		Yes	Violent offender sample, psychiatric disorder (severe personality disorder) sample.	N/A (no recidivism outcomes reported).

tudy reference, ountry	Study design	Sample size	Treatment setting	Planned duration	Was participation voluntary?	Specific population? ²	Recidivism outcome summary Positive, Negative, Mixed/Non- significant ³
evel 4. Comparison be lifferences.	tween multiple units w	ith and with	out the progran	n, controlling	for other factors,	or using comparis	on units that evidence only minor
(Berman, 2005), Sweden	Matched comparison group	727	Prison		Yes		N/A (no statistical tests reported). Over 3 years, R&R group had a 109 reduction in reconviction rates compared to the comparison group.
(Cann, Falshaw, Nugent, & Friendship, 2003), UK	Matched comparison group	4,390	Prison				Mixed R&R effect. Over 2 years, the recidivism (reconviction) rates of the R&R group were not significantly different from the comparison group. The R&R completers had a significant 13% reduction in recidivism compared to the comparison group.
(Friendship, Blud, Erikson, Travers, & Thornton, 2003), UK	Matched comparison group	2,468	Prisons		Yes		Positive R&R effect. Over 2 years, low-medium risk participants in the R&R group had 45% reduction in recidivism (re- conviction) compared to the comparison group, while the medium-high risk participants had a 20% reduction.

tudy reference, ountry	Study design	Sample size	Treatment setting	Planned duration	Was participation voluntary?	Specific population? ²	Recidivism outcome summary Positive, Negative, Mixed/Non- significant ³
evel 5. Random assignme	ent and analysis of c	omparable	units to program a	and comparis	son groups.		
(Robinson, 1995), Canada	Randomized ⁴	4,072	Prison	8-12 weeks	Yes		Non-significant R&R effect. Over an average of 1 year, R&R completers had an 11% reduction in recidivism (any re-incarceratior compared to comparison group.
(Van Voorhis et al., 2001), USA	Randomized	468	Community	4 months			Non-significant R&R effect. Over 30 months R&R had a 10% reduction in recidivism (re-arrests compared to the comparison group.
(Van Voorhis et al., 2002), USA	Randomized	1,367	Mixed (prisons, community)	3.8 months		Women subgroup	Non-significant R&R effect. Over 12 months, the R&R group had a 7% reduction in recidivism (re-arrest) compared to the comparison group.
(Wettermann et al., 2012), Germany	Randomized	31	Forensic psychiatric hospital unit				N/A (no recidivism outcomes reported).

¹The studies are organized according to the Maryland Scale of Scientific Methods, with Level 1 being the weakest design and Level 5 the strongest (Sherman et al., 1998). ²This column identifies studies where the samples were explicitly limited to a particular population (except where a subgroup of women was specifically examined). Notably, a significant portion of the participants in most of these trials likely met criteria for a SUD, but SUD samples are only noted here when the treatment was explicitly targeted only to adults with a SUD.

³ Positive = R&R participants demonstrated a significant reduction in recidivism, with no tests showing a significant increase in recidivism; Negative = R&R participants demonstrated a significant increase in recidivism, with no tests showing a significant reduction in recidivism; Mixed/Non-significant = significance tests on recidivism outcomes showed no significant change for R&R participants, or showed conflicting results. *Note.* Report of follow-up data on recidivism rates varies across studies and does not always indicate end of treatment (e.g., treatment ends and measurement of recidivism begins).

⁴ Participants were randomized to treatment or waitlist. Some waitlist participants were excluded from analysis after receiving R&R.

Lesson 1: Overview and introduction.

Lessons 2-5 and 11-15: Social skills instruction prepares group members to engage in pro-social interactions based on self-understanding and consideration of the impact of their actions on others.

Lessons 6-10: Cognitive self-change teaches individuals a concrete process for self-reflection aimed at uncovering antisocial thoughts, feelings, attitudes, and beliefs.

Lessons 16-24: Problem solving skills integrates the two previous interventions to provide group members with an explicit step-by-step process for addressing challenging and stressful real life situations.

Lesson 25: Provides a wrap up of the program with the option of extending the program based on the needs of group members.

Source: (adapted from Bush et al., 2011)

Table 14. Thinking 4 a Change Studies¹

Study reference,	Study design	Sample	Treatment	Planned	Was	Specific	Recidivism outcome summary
country		size	setting	duration	participation	population? ²	Positive, Negative, Mixed/Non-
					voluntary?		significant ³

Level 1. Correlation between a crime prevention program and a measure of crime or crime risk factors at a single point in time.

No single group studies were identified.

Level 2. Temporal sequence between the program and the crime or risk outcome clearly observed, or the presence of a comparison group without demonstrated comparability to the treatment group.

(Center for Evidence Based Practice, 2011), USA	Non-equivalent comparison group	1,339	Community	1 month	 	N/A (no recidivism outcomes reported).
(Lowenkamp, Hubbard, Makarios, & Latessa, 2009), USA	Non-equivalent comparison group	217	Community	11 weeks	 	Positive T4C effect. Over 21.4-32.4 months, T4C treatment group had a 35% reduction in recidivism (re-arrest) compared to the comparison group.

Level 3. A comparison between two or more comparable units of analysis, one with and one without the program.

No Level 3 studies were identified.

Level 4. Comparison between multiple units with and without the program, controlling for other factors, or using comparison units that evidence only minor differences.

(Golden, 2002),	Matched	142	Community	11 weeks	Yes	 Non-significant T4C effect.
USA	comparison group					Over 3-12 months, T4C completers had a 34% reduction of recidivism (re-offense/new offense) compared to comparison group.

Table 14. Thinking 4 a Change Studies (continued)

Study reference,	Study design	Sample	Treatment	Planned	Was	Specific	Recidivism outcome summary
country		size	setting	duration	participation	population? ²	Positive, Negative, Mixed/Non-
					voluntary?		significant ³

Level 5. Random assignment and analysis of comparable units to program and comparison groups.

No fully randomized studies were identified.

¹The studies are organized according to the Maryland Scale of Scientific Methods, with Level 1 being the weakest design and Level 5 the strongest (Sherman et al., 1998). ²This column identifies studies where the samples were explicitly limited to a particular population (except where a subgroup of women was specifically examined). Notably, a significant portion of the participants in most of these trials likely met criteria for a SUD, but SUD samples are only noted here when the treatment was explicitly targeted only to adults with a SUD.

³ Positive = T4C participants demonstrated a significant reduction in recidivism, with no tests showing a significant increase in recidivism; Negative = T4C participants demonstrated a significant increase in recidivism, with no tests showing a significant reduction in recidivism; Mixed/Non-significant = significance tests on recidivism outcomes showed no significant change for T4C participants, or showed conflicting results. *Note.* Report of follow-up data on recidivism rates varies across studies and does not always indicate end of treatment (e.g., treatment ends and measurement of recidivism begins).

Table 15. SAMHSA's GAINS Center - Treatments for justice-involved adults with SUDs

Treatment	Description					
Evidence-Based Practices						
Cognitive Behavioral	A therapeutic approach that helps clients address problematic behaviors and develop					
Therapy (CBT) ¹	effective coping strategies to stop substance use and address other synchronous issues.					
Motivational Interviewing (MI) ²	A consumer-centered, directive method for enhancing intrinsic motivation to change by exploring and resolving ambivalence.					
Contingency Management (CM) Interventions ³	The objective of CM interventions is to reinforce a client's commitment to abstinence and to reduce his/her drug use using positive (e.g., vouchers) and negative (e.g., increased supervision) reinforcers in response to desired and undesired behaviors.					
Pharmacotherapy (i.e., Medication Assisted Treatments) ⁴	Treatment that uses one or more medications as part of a comprehensive plan to reduce symptoms associated with dependence on drugs and/or alcohol.					
Relapse Prevention Therapy⁵	A systematic treatment method of teaching recovering clients to recognize and manage relapse warning signs.					
Behavioral Couples Therapy (BCT) ⁶	A family treatment approach for couples that uses a "recovery contract" and behavioral principles to engage both people in treatment, achieve abstinence, enhance communication, and improve the relationship.					
Promising Practices						
Case Management ⁷	An intervention that involves the coordination and/or direct delivery of services to meet the complex needs of justice-involved clients with substance use disorders.					
Evidence-Based Programs						
Modified Therapeutic Community (MTC) ⁸	MTCs alter the traditional TC approach in response to the psychiatric symptoms, cognitive impairments, and other impairments commonly found among individuals with co-occurring disorders. These modified programs typically have (1) increased flexibility, (2) decreased intensity, and (3) greater individualization.					
Promising Programs						
12-Step or Other Mutual	Groups of non-professionals who share a problem and support one another through the					
Aid Groups	recovery process.					
Peer-Based Recovery	Justice-involved clients who are in recovery providing support to other clients who are					
Support Programs ⁹	also involved, or at risk of becoming involved, in the criminal justice system.					

¹ For more information on Cognitive Behavioral Therapy, visit <u>http://gainscenter.samhsa.gov/cms-assets/documents/69181-</u> 899513.rottercarr2010.pdf

² For more information on Motivational Interviewing, visit <u>http://gainscenter.samhsa.gov/pdfs/ebp/Motivational_Interviewing2011.pdf</u>

³ For more information on Contingency Management, visit page 49 in <u>http://static.nicic.gov/Library/023362.pdf</u>

⁴ For more information on Pharmacotherapy, visit

http://store.samhsa.gov/product/Medication-Assisted-Treatment-for-the-21st-Century/F038

⁵ For more information on Relapse Prevention, visit <u>http://kap.samhsa.gov/products/manuals/taps/19.htm</u>. *Note.* Within VA, RP is a type of treatment for SUD that relies heavily on core CBT principles and consequently CBT and RP may be used interchangeably. ⁶ For more information on Behavioral Couples Therapy, visit page 59 in http://static.nicic.gov/Library/023362.pdf

⁷ For more information on Case Management for substance abuse and dependence in criminal justice settings, visit http://www.ncbi.nlm.nih.gov/books/n/tip27/A50228/#A50259

⁸ For more information on Modified Therapeutic Communities, visit <u>http://www.nrepp.samhsa.gov/ViewIntervention.aspx?id=144</u> ⁹ For more information on Peer-Based Recovery Support Programs, visit

http://store.samhsa.gov/shin/content/SMA09-4454/SMA09-4454.pdf

Source: (adapted from Blandford & Osher, 2012, pp. 7-8)

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