Assessing the Impact of Crisis Intervention Teams: A Review of Research

Academic Training to Inform Police Responses

Best Practice Guide

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Best Practice Guide on Responses to People with Behavioral Health Conditions or Developmental Disabilities:

A Review of Research on First Responder Models

The role of law enforcement in the United States has been characterized by a delicate balance between providing public safety, serving the community, and enforcing laws. Inherent in this work are public expectations for law enforcement officers to fill many roles, such as problem-solving, community relations, public health, and social work. Among their responsibilities, police officers have been increasingly tasked with responding to crisis situations, including those incidents involving people with behavioral health (BH) conditions and/or intellectual and developmental disabilities (IDD). These situations can present significant challenges for community members and officers, highlighting the need for clear policy direction and training in the law enforcement community to effectively serve these populations. The need for training and resources to facilitate effective responses also applies to routine activities and interactions between police officers and individuals with BH conditions and IDD.

Supported by the Bureau of Justice Assistance, researchers from the University of Cincinnati, in collaboration with Policy Research Associates, The Arc of the United States' National Center on Criminal Justice and Disability, and the International Association of Chiefs of Police, are working to address the need for additional training and resources to enhance police encounters with individuals with BH conditions and IDD. Specifically, the *Academic Training to Inform Police Responses* is being developed to raise awareness in the policing community about the nature and needs of people living with BH conditions and/or IDD and to facilitate the use of evidence-based and best practices in police responses to these individuals.

As part of this work, the research team is gathering the available evidence documenting the effectiveness of various police, behavioral health, disability, and community responses to incidents involving individuals experiencing behavioral health crises. Collectively, this work will be assembled into a larger "Best Practice Guide" for crisis response, presenting chapters on existing response models, such as crisis intervention teams, co-responder teams, law enforcement assisted diversion, mobile crisis teams, disability response, EMS-based services, and more. The writing following this introduction was prepared as a single chapter to be included within the larger comprehensive guide. This chapter provides a review of the available research examining the implementation and impact of crisis intervention team programs across communities. The review of this research is preceded by a list of key terms.

KEY TERMS

Addiction	The most severe form of substance use disorder, associated with compulsive or uncontrolled use of one or more substances. Addiction is a chronic brain disorder that has the potential for both recurrence (relapse) and recovery.
Behavioral health	"A term of convenience that refers to both mental illnesses and mental health needs (e.g., trauma) and substance use...disorders and substance use needs and issues, as well as to the overlap of those behavioral health issues into primary health, cognitive disabilities, criminal justice, child welfare, schools, housing and employment, and to prevention, early intervention, treatment and recovery. Behavioral health also includes attention to personal behaviors and skills that impact general health and medical wellness as well as prevent or reduce the incidence and impact of chronic medical conditions and social determinants of health" (Committee on Psychiatry and the Community for the Group for the Advancement of Psychiatry, 2021, p. 14).
Behavioral health condition	An umbrella term for substance use disorders and mental health conditions.
Crisis intervention team model	A law enforcement-based response model for crisis intervention and diversion founded upon officer training and community, health care, and advocacy partnerships.
Developmental disability	Physical and/or mental impairments that begin before age 22, are likely to continue indefinitely, and result in substantial functional limitations in at least three of the following: self-care (dressing, bathing, eating, and other daily tasks), walking/moving around, self- direction, independent living, economic self-sufficiency, and language (Developmental Disabilities Assistance and Bill of Rights Act of 2000). Self-direction is a conceptual skill that refers to the ability to analyze and make decisions for oneself.
Disability	A physical or mental impairment or a history of such impairment (or regarded as an impairment) that substantially limits a major life activity (Regulations to Implement the Equal Employment Provisions of the Americans with Disabilities Act, 29 CFR §1630.2, 2016).
Intellectual disability	"A disability characterized by significant limitations in both intellectual functioning and in adaptive behavior, which covers many everyday social and practical skills. This disability originates before the age of 22" (American Association on Intellectual and Developmental Disabilities, n.d., para. 1). An intellectual disability is a category of developmental disability.
Mental health condition	A wide range of conditions that can affect mood, thinking, and/or behavior (National Alliance on Mental Illness, n.d.). This term is more inclusive than "mental illness." Individuals living with a mental health condition may not necessarily be medically diagnosed with a mental illness.
Promising practice	A specific activity or process that has an emerging or limited research base supporting its effectiveness. Promising practices are not considered "evidence-based" until additional evaluation research is completed to clarify short- and long-term outcomes and impact on groups going through the activity or process.

Public health system	"All public, private, and voluntary entities that contribute to the delivery of essential public health services within a jurisdiction...The public health system includes public health agencies at state and local levels, healthcare providers, public safety agencies, human service and charity organizations, education and youth development organizations, recreation and arts-related organizations, economic and philanthropic organizations, and environmental agencies and organizations" (Centers for Disease Control and Prevention, n.d., para. 1).
Service provider	Any individual (practitioner) or entity (provider) engaged in the delivery of services or aid and who is legally authorized to do so by the state in which the individual or entity delivers the services.
Substance	A psychoactive compound with the potential to cause health and social problems, including substance use disorders (and their most severe manifestation, addiction). According to the National Institute on Drug Abuse, the most commonly used addictive substances (including the consideration of tobacco, alcohol, and illegal and prescription drugs) are marijuana (cannabis), synthetic cannabinoids (K2/Spice), prescription and over-the-counter medications (e.g., opioids, stimulants, CNS depressants), alcohol, anabolic steroids, cocaine, fentanyl, hallucinogens, heroin, inhalants, MDMA ("ecstasy" or "molly"), methamphetamine, nicotine, rohypnol and GHB ("date rape" drugs), and synthetic cathinones ("bath salts") (National Institute on Drug Abuse, 2018).
Substance use disorders	A medical illness caused by repeated use of a substance or substances. "According to the Fifth Edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM- 5®), substance use disorders are characterized by clinically significant impairments in health, social function, and... control over substance use and are diagnosed by assessing cognitive, behavioral, and psychological symptoms." Substance use disorders range from mild to severe and from temporary to chronic. They typically develop gradually over time with repeated misuse, leading to changes in brain circuits governing incentive salience (the ability of substance-associated cues to trigger substance seeking), reward, stress, and executive functions such as decision-making and self-control. Note: Severe substance use disorders are commonly called "addictions" (American Psychiatric Association, 2013, p. 483; National Institute on Drug Abuse, 2018, p. 29).

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EXECUTIVE SUMMARY

The Crisis Intervention Team (CIT) model is a police-led, collaborative response for behavioral health crises that involves training patrol officers to recognize and de-escalate situations involving individuals experiencing a behavioral health crisis and to refer those individuals to appropriate services, as opposed to conducting an arrest, when possible. The goals of CIT programs are to increase the safety of police interactions with individuals experiencing a crisis, to improve access to behavioral health services for individuals in crisis, and to reduce reliance on the criminal justice system in addressing behavioral health-related challenges. These programs have most traditionally been used to address individuals experiencing mental health- or substance use-related crises. Less research has examined the utility of these programs for improving police interactions with individuals with intellectual and/or developmental disabilities (IDD).

This document reviews the available research regarding the implementation and effectiveness of CIT programs. This review is organized into five major sections. First, the definition and implementation of the CIT model is presented. Second, the goals, format, and effectiveness of CIT training are discussed. Third, the impact of the CIT model on increasing connections to services, enhancing crisis de-escalation, reducing pressure on the criminal justice system, and the cost effectiveness of this strategy are reviewed. The fourth section addresses stakeholders' perceptions of CIT programs, including police officers, behavioral healthcare providers, and impacted individuals and their families. The report concludes with practical implications for agencies seeking to implement CIT programs and considerations for future evaluations of CIT programs.

Definition and Implementation of the Crisis Intervention Team Model

The CIT model is a collaborative approach to behavioral health crisis response that seeks to improve the outcomes of police interactions with individuals in crisis through enhanced officer training and partnerships between the police, behavioral health service providers, and other community partners. CIT programs are expected to achieve numerous goals that benefit individuals living with behavioral health conditions, the criminal justice system, and the behavioral health community. These goals include improved service provision, increased safety for all, reduced reliance on the criminal justice system, more efficient access to individuals in crisis by the behavioral health community, and improved relationships between these different groups of stakeholders. This section reviews the initial development of the CIT model in Memphis (TN), the key components of the CIT model, and how CIT programs have been implemented across different communities.

The Memphis CIT Model: The CIT model was first established in 1988 in Memphis, Tennessee after a fatal police shooting of an individual with a known history of mental illness who was wielding a knife. This event resulted in renewed community attention to police interactions with individuals experiencing mental health crises. As a result, the Memphis Police Department partnered with the University of Memphis, the University of Tennessee, the National Alliance

on Mental Illness, and representatives from multiple mental health service providers and advocacy groups to establish a comprehensive response to individuals in crisis. This Memphis CIT model depends upon two key components: (1) training patrol officers to identify and effectively respond to individuals experiencing a crisis using de-escalation techniques, and (2) establishing relationships between the police department and local behavioral health service providers so officers can transport individuals in crisis to services, as opposed to conducting arrests.

In Memphis, relationships established between the police and the behavioral healthcare community resulted in the creation of a 24-hour crisis triage center with an open-door policy. This center enables officers to refer individuals in crisis to immediate services and to quickly return to their regularly assigned patrol responsibilities. Given the success of CIT in Memphis – which reported reduced reliance on arrest, increased efficiency for the police who transport individuals to behavioral health services, reduced officer use of force, and reduced citizen and officer injuries – these programs have been adopted in numerous other agencies in the US and throughout the world.

CIT model components: The CIT model consists of several components, including: (1) establishing strong partnerships between the police, behavioral health community, and advocacy groups; (2) training patrol officers to respond to CIT events, and; (3) encouraging officers to refer individuals experiencing a behavioral health crisis to services in lieu of arrest, when possible. This section describes the role of participating agencies who should be included in a CIT collaboration. CIT training and the impact of training on the outcomes of police-citizen encounters in crisis situations are more fully discussed in separate sections of this report.

Given that CIT programs are police-led, police agencies are key partners in these programs. Patrol officers trained in CIT are central to the success of these initiatives by providing immediate responses to individuals experiencing a crisis. Further, police dispatchers are crucial to identifying incidents that could involve a crisis and dispatching CIT officers to respond to those incidents. However, given that dispatchers are not always aware that an incident involves an individual in crisis, all patrol officers should be aware of the CIT program and request backup from CIT officers, as needed.

In order for CIT officers to divert individuals from the criminal justice system, they must have access to behavioral health service agencies and community partners who can assist individuals experiencing a crisis. These behavioral health service providers and community partners should be included in all phases of the implementation of a CIT program, from planning through continued refinement of policies and processes to ensure the goals of the program are being achieved. These partners should additionally be active participants in training officers about the causes and indicators of behavioral health conditions, as well as effective ways to interact with individuals living with those conditions.

Behavioral health advocates should be key participants in CIT programs. These representatives can provide important insight into the needs of individuals impacted by behavioral health

conditions. They can also help humanize these individuals and increase officer empathy for people in crisis. Individuals impacted by behavioral health crises and their family members may also participate in CIT training, providing officers an opportunity to interact with and learn from these individuals.

CIT implementation across different programs: The structure of individual CIT programs varies across communities depending on the local context. For instance, some agencies use CIT as one of several strategies to improve police responses to behavioral health crises, while others use CIT as a standalone response. The design of individual CIT programs also varies, with some programs operating out of a single municipality and others operating at a regional level. The format of CIT training also differs across programs. One of the most important differences across programs are available resources. Though officers in Memphis have access to a full-time crisis response center, officers in other programs might rely on a network of behavioral health service providers and community partners to provide services.

The Impact of Crisis Intervention Team Training

The impact of officer CIT training is the most commonly evaluated element of the CIT model, largely using surveys administered to officers immediately prior to and following CIT training. Some researchers have suggested that this body of research is large enough to establish CIT training as an evidence-based best practice for improving officer knowledge and attitudes. The research presents findings in three primary areas, including:

Behavioral health awareness and stigma reduction: Several evaluations have found that CIT training improves officer knowledge surrounding behavioral health conditions, reduces stigma associated with behavioral health, and increases officer empathy and confidence in their ability to successfully intervene in a crisis incident.

Knowledge of available behavioral health services: In order for CIT to serve as a diversion program, officers need to be aware of available alternatives to arrest. Researchers have found that CIT training successfully increases officer awareness of behavioral health services within their communities and their support for referring individuals in crisis to these services.

Use of de-escalation techniques: Finally, evaluations have also found that CIT training increases officer familiarity with de-escalation techniques and support for de-escalating crisis events. These studies have largely relied on officer self-reports.

The Impact of Crisis Intervention Team Programs

Less research has examined the impact of CIT programs on the outcomes of police interactions with individuals in crisis. Although early results from Memphis suggest that CIT resulted in reduced arrests, use of force, and injuries, these findings have not been replicated in all CIT studies. Further, the methods used to evaluate the impact of CIT programs have varied, with some researchers examining self-reported responses to individuals in crisis and others using

administrative police records. Given the multifaceted goals of CIT, the findings are presented across four primary areas, including: increasing connections to services, enhancing crisis de-escalation, reducing pressure on the criminal justice system, and cost-effectiveness.

Increasing connections to services: One of the primary goals of CIT is to increase connections between the police and behavioral health service providers. Research in several locations suggests that CIT officers are more likely to refer individuals who experience a behavioral health-related crisis to relevant services than non-CIT officers. Although officers in Memphis have access to a full-time triage center that provides immediate assessment services for individuals in crisis, not all jurisdictions have access to the same resources. As a result, CIT officers in some agencies have been more likely to refer individuals in crisis to community-based services, even if the officers are not able to directly transport those individuals to those locations. The increased connection to services has been associated with improved outcomes for individuals impacted by a crisis in some locations, including increased compliance with behavioral health treatment and reduced recidivism.

Enhancing crisis de-escalation: Research examining the impact of CIT programs on crisis de-escalation has been somewhat limited. Some studies have found that CIT reduces officer use of force, citizen injuries, and officer injuries; others find no effects. Although many officers report that CIT has provided them with valuable skills to safely de-escalate incidents and avoid injuries, research using administrative data has not always supported this claim. Given that these studies have been predominately descriptive, more rigorous research is needed to understand whether CIT is achieving this goal.

Reducing pressure on the criminal justice system: Another key objective of CIT is to divert individuals experiencing crises away from the criminal justice system. As a result, CIT is anticipated to reduce the use of arrests to resolve these incidents and the amount of time officers spend responding to crisis events.

> Arrests: Relatively few studies have examined the relationship between CIT programs and arrest. The findings across this body of research are mixed, with some studies suggesting that CIT officers are less likely to conduct arrests than non-CIT officers, although others find no differences in arrests. The methods used to examine these outcomes vary, with some studies relying on official data and others using officer self-reported behaviors. Many of these studies are descriptive in nature.
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> Officers' Time Spent on Calls for Service: A few studies have found that CIT programs reduce the amount of time officers spend responding to behavioral health crises. In Memphis, patrol officers who referred individuals in crisis to the triage center were able to return to patrol within fifteen minutes. However, the time spent referring individuals to services depends on the intake policies established by participating partner agencies.

Cost-effectiveness: CIT proponents often highlight cost savings that can be achieved by diverting individuals experiencing behavioral health conditions away from the criminal justice system and

into services. CIT is a pre-booking diversion program, meaning that officers who encounter an individual in crisis are expected to refer them to relevant services *before* the crisis escalates into a serious criminal event. As a result, this strategy is expected to reduce jail and the court costs associated with processing these individuals. However, CIT programs can result in increased use of behavioral health services, deflecting costs from the criminal justice system to the behavioral healthcare system. Some prior research has identified dramatic cost savings associated with the use of CIT programs that divert individuals in crisis into treatment. In contrast, other studies have found that these programs are expensive to implement and operate.

Stakeholders' Perceptions of Crisis Intervention Teams

Understanding how CIT programs are perceived by relevant stakeholders is important for identifying effective program components and room for improvement. Given the multiple agencies represented in these programs, it is important to assess police officer perceptions, partner agency perceptions, and the perceptions of individuals who interact with CIT officers.

Police perceptions: Police officers are generally supportive of the use of CIT, with officers who participate in these programs overwhelmingly viewing them as helpful. CIT officers are generally more confident in their ability to respond to crisis events and have rated their departments as more effective in responding to individuals in crises than officers who are not trained in CIT.

Partner agency perceptions: Although less research has examined behavioral health service providers' perceptions of CIT, several studies have found that these providers have improved perceptions of their interactions with the police after these programs are implemented. Service providers have also reported viewing the police as more capable of effectively interacting with individuals in crisis after these programs were deployed. Some service providers have even reported that patients transported by the police are calmer when CIT is used.

Impacted individuals' perceptions: Individuals living with behavioral health conditions and their family members have also reported positive perceptions of these programs. Many individuals appreciate the efforts being made to avoid the use of arrest to respond to crisis situations and to ensure that they are provided adequate treatment and access to necessary medication. Citizens have reported being more likely to contact the police for assistance and being less fearful of the police as a result of CIT.

Discussion & Conclusion

CIT is a comprehensive and collaborative police-led crisis response model designed to reduce reliance on the criminal justice system to address individuals experiencing behavioral health crises through specialized officer training and the ability to divert individuals to behavioral health services. CIT is widely regarded as an effective strategy and has been adopted in numerous agencies throughout the world. However, substantial variation in available resources can impact the success of these programs in practice. Although a substantial body of research

suggests that CIT programs are successful in changing officer attitudes of behavioral health crises, future research will need to determine whether these attitudinal changes translate into improved crisis response in practice (Ritter et al., 2010). Further, most of the research in this area is descriptive in nature. More rigorous evaluations should be conducted to clarify the impact of CIT programs on intended outcomes.

Practical implications: This review identifies several practical implications that should be considered in understanding the impact of CIT. Namely, CIT depends on partnerships between the police and community organizations to improve responses to individuals in crisis. The types of available services differ in large metropolitan areas, compared to smaller and more rural communities. These differences have important implications for establishing community partnerships and developing CIT policies. Regional and county CIT programs can be adopted to provide officers with adequate resources to refer individuals in crisis in smaller and more rural agencies. Finally, ensuring that CIT programs achieve their intended goals depends on continually assessing and refining these programs.

Research implications: This review highlights several research implications for future evaluation of CIT programs, as well. Identifying incidents that meet the criteria of a CIT-eligible event is an enduring challenge in CIT research. This challenge has resulted in the use of different data sources across the CIT literature, including administrative data created to capture the characteristics of crisis events and officer self-report data detailing their experiences responding to hypothetical or actual crisis incidents. Further, many CIT studies are descriptive in nature and do not involve control groups. The selection of patrol officers is particularly challenging given that many CIT programs rely on officers who volunteer to participate. This program structure further inhibits the use of randomized controlled trials in many cases. As a result, the vast majority of the research examining CIT has assessed officer attitudes and perceptions, with less research focusing on behavioral outcomes associated with the implementation of CIT. Additionally, although CIT is a comprehensive crisis response model that includes representatives from multiple separate agencies, the vast majority of the research focuses on police officers. Less research has examined dispatchers, service providers, or impacted individuals themselves. Finally, most CIT research has focused on individuals experiencing mental health conditions or substance use disorders, with few evaluations examining the experiences of individuals with intellectual and/or developmental disabilities (IDD). More research is need to examine the development, delivery, and impact of CIT training and programs that integrate education, policies, and procedures related to IDD to enhance police interactions with this population.

Conclusion: CIT programs have been implemented in numerous police agencies across the world. Through providing specialized training to patrol officers and increasing connections to behavioral health services, these programs are intended to benefit individuals impacted by behavioral health conditions, enhance crisis de-escalation, reduce pressure on the criminal justice system, and result in cost savings. Several studies have found that CIT successfully improves officer knowledge surrounding behavioral health, though additional research is needed to establish whether CIT changes officer responses to crisis events in practice.

Key Takeaways

- The Crisis Intervention Team (CIT) model is a police-led, collaborative response that involves training patrol officers to identify and de-escalate behavioral health crisis situations. CIT officers are expected to refer individuals in crisis to relevant services, instead of relying on the use of arrests. The goals of the program include improving officer knowledge about behavioral health, to increase connections to services for individuals in crisis, to enhance de-escalation, to reduce reliance on the criminal justice system, and to achieve cost savings through diverting individuals from arrest and resolving crisis situations before they escalate.

- The success of the CIT model depends on strong collaborative partnerships between the police, local behavioral health service providers, and behavioral health advocates to provide comprehensive community-based responses to individuals in crisis. The implementation of CIT varies across different communities depending on available resources, with some agencies having access to full-time crisis triage centers and other agencies relying on more limited access to behavioral health services.

- CIT training is typically administered to patrol officers who volunteer to participate, although some agencies have mandated officers to participate in training. Training is administered over a 40-hour period and includes information about identifying signs of a behavioral health crisis, available local resources to which individuals experiencing a crisis can be referred, and de-escalation techniques. Training is delivered by police personnel, behavioral health specialists, and behavioral health advocates. Training includes site visits to behavioral health treatment providers and de-escalation role play scenarios. Several studies have found that CIT training improves officer knowledge surrounding behavioral health, awareness of available services, and support for using de-escalation tactics.

- Studies suggest that officers trained in CIT are more likely to refer or transport individuals experiencing a behavioral health crisis to services than non-CIT officers. Research examining the impact of CIT on crisis de-escalation is somewhat mixed. Some studies suggest that CIT reduces use of force and injuries to citizens and officers, although others find no effects. The impact of CIT on arrests has also been inconsistent across studies, with some evaluations finding reductions and others finding no effects. A few studies have found that CIT reduces the amount of time officers spend responding to behavioral health incidents. Cost-effectiveness evaluations have found that these programs are expensive to implement, but that they can result in substantial cost savings through limiting reliance on jails to house individuals in crisis.

- Police officers generally report positive perceptions of CIT programs in their agencies. Although less research has examined behavioral healthcare provider perceptions and perceptions of individuals impacted by behavioral health conditions and their family members, these studies also largely find positive perceptions of CIT programs.

- Most CIT research has been descriptive and has focused on the impact of training on officer knowledge and perceptions. Additional research using more rigorous methodologies to evaluate the impact of CIT on officer behavior in contacts with individuals in crisis is needed. Research has also predominately focused on the use of CIT to resolve crises involving mental health conditions and/or substance use disorders, with few evaluations of the development and use of CIT training and programs in response to people with IDD. Researchers should further examine whether CIT is an effective model for responding to individuals with disabilities in crisis.

I. Introduction

One of the most commonly implemented and evaluated approaches to addressing behavioral health crises is the crisis intervention team (CIT) model, a police-based response model for crisis intervention and diversion founded upon officer training and community, health care, and advocacy partnerships. CITs are local programs designed to improve the way police and the community responds to people with mental health conditions, substance use disorders, and/or those with intellectual and developmental disabilities (IDD) experiencing a crisis. They are built on strong partnerships between police, mental health and substance use provider agencies, IDD provider agencies, community organizations, and individuals and families affected by mental health conditions, substance use disorders, and/or those with IDD. Specifically, the CIT model is a collaborative police-based intervention that involves training police officers to respond to individuals experiencing behavioral health crises and to divert individuals in crisis into services, as opposed to jail.

CIT is intended to accomplish two primary goals: (1) to ensure safe interactions between police officers and individuals experiencing behavioral health crises, and (2) to divert individuals in crisis away from the criminal justice system and into behavioral health services when possible (Canada et al., 2012). By diverting individuals experiencing behavioral health-related conditions away from jail and into treatment, CIT is expected to better serve the individuals and to reduce the use of criminal justice resources when they are not needed.

CIT programs have been implemented by police agencies across the world and are regularly promoted as a best practice for community crisis response (see e.g., President's Task Force on 21st Century Policing, 2015). The available research suggests that CIT programs are effective in improving officer knowledge surrounding behavioral health-related crises, officer perceptions of their ability to effectively intervene in a crisis situation, and officer support for using de-escalation tactics. Less research has examined the influence of CIT on arrests, use of force, and injuries, however. Although some studies have identified reductions in these outcomes when CIT is used, these findings are not universal. Furthermore, the utility of CIT for responding to individuals with IDD has yet to receive as much research attention as programs aimed toward individuals experiencing mental health-related or substance use-related crises. Given the limitations of the available research the CIT model is best considered as a *promising* approach for improving the outcomes of behavioral health crises in the community.

This document provides a review of the available research regarding the implementation and impact of CIT programs across communities. This review is organized into the following four sections: Section II presents the definition and implementation of the CIT model, discussing the goals of CIT programs, the development of the Memphis CIT model, the CIT model components, and variation in programs' delivery across different communities. Next, Section III examines the impact of CIT training on officer behavioral health awareness and stigma reduction, knowledge of available behavioral health services, and ability to identify and use de-escalation techniques. Section IV considers the impact of CIT on increasing connections to services for individuals experiencing a behavioral health-related crisis, enhancing de-escalation in police encounters

with individuals in crisis, reduced pressure on the criminal justice system, and the cost-effectiveness of CIT. Section V details stakeholders' perceptions of CIT programs from the perspectives of the police, partnering behavioral healthcare providers, and service users. Finally, Section VI discusses the research findings with particular attention to identifying implications for practice and directions for future research.

II. Definition and Implementation of the Crisis Intervention Team Model

The CIT model is a collaborative response to behavioral health crises that seeks to improve the outcomes of police interactions with individuals in crisis through enhanced officer training and partnerships between the police and behavioral health service providers. CIT programs are expected to achieve numerous goals that benefit individuals living with behavioral health conditions, the criminal justice system, and the behavioral health community. These goals include improved service provision, increased safety for all, reduced reliance on the criminal justice system, more efficient access to individuals in crisis by the behavioral health community, and improved relationships between these different groups of stakeholders. These goals are presented in Table 1, below. The remainder of this section reviews the initial development of the CIT model in Memphis (TN), outlines the key components of the CIT model, and discusses how CIT programs have been implemented across different communities.

Table 1. Goals of CIT Programs

Individuals
Immediate access to services
Referral to relevant resources
Improved police responses intended to de-escalate the crisis
Reduced stress associated with criminal justice contact
Reduced injuries to citizens that can occur during police contacts
Criminal justice system
Improved police interactions with individuals in crisis
Reduced patrol officer time spent transferring/referring individuals to services
Reduced number of arrests involving individuals experiencing behavioral health crises
Reduced injuries to officers that can occur during these interactions
Reduced number of individuals experiencing behavioral health crises in jails
Reduced number of court cases involving individuals experiencing behavioral health crises
Improved cost-efficiency for addressing individuals impacted by behavioral health crises
Behavioral health community
Improved access to community members impacted by behavioral health conditions
More efficient transfer processes between police officers and relevant services
Improved relationships with the police community

A. The Memphis CIT Model

The CIT model was first developed in 1988 in Memphis (TN) following a fatal police shooting in an incident involving a man with a history of mental illness and substance use who was wielding a knife. His death resulted in renewed community attention to police responses to individuals experiencing behavioral health crises. To address rising concerns, a collaborative group, including representatives from the Memphis Police Department, the University of Memphis, and the University of Tennessee, worked together to develop the Memphis CIT model for crisis response – a comprehensive response to individuals experiencing behavioral health crises designed to promote citizen and officer safety. Specifically, the purpose of this model is to better serve individuals experiencing a crisis situation through specialized police training and formalized relationships between the police and the behavioral health community (Wells & Schafer, 2006).

The Memphis CIT model is designed as a pre-booking diversion program that occurs at the point of contact between the police and citizens, encouraging officers to divert individuals from the criminal justice system when possible (Compton et al., 2006). When fully implemented, this response requires (1) training for 911 call-takers and dispatchers in the identification of calls for service involving behavioral health crises to appropriately assign those calls to CIT officers, (2) training for volunteer CIT officers in the identification of signs of crisis, appropriate responses to crisis incidents, and diversion to behavioral health services, and (3) providing officers access to a 24-hour crisis center or other services that are available to process individuals transported by the police (Cowell et al., 2004; Kane et al., 2018). Collectively, this response is intended to reduce the reliance on arrests and physical force to resolve crisis incidents, when possible, and to increase individuals' access to behavioral health services (Steadman et al., 2000). The success of this model depends upon the relationships between the police and the behavioral health community to ensure that officers can provide individuals direct access to services (Cuddeback et al., 2016). The Memphis CIT model is widely regarded as effective and has been implemented in numerous police agencies across the United States, Canada, Australia, and the United Kingdom (Herrington & Pope, 2014; Rogers et al., 2019; Steadman et al., 2000).

It is important to note that, although the Memphis CIT model was initially created to improve responses to individuals experiencing crises related to mental health conditions and/or substance use, CIT programs may also benefit individuals experiencing other behavioral health and IDD-related crises. In particular, the expansion of partnerships with different types of service providers has become part of the natural progression of CIT programs in many communities, including new partnerships specific to IDD needs and services that complement the overall mission of CIT. Still, most CIT programs have focused on individuals experiencing mental health conditions or substance use; fewer have been designed to respond to individuals with IDD. This is an important limitation given some estimates that 20% of individuals with severe mental illness also have developmental disabilities (Vickers, 2000). The co-occurrence of mental health conditions, substance use, and IDD creates a need for comprehensive responses to serve individuals experiencing each of these conditions, as well as co-occurring conditions.

B. Components of the CIT Model

As mentioned previously, the CIT model for collaborative crisis response consists of several components, including: (1) establishing partnerships between the police, the behavioral health community, and advocacy groups; (2) training patrol officers to respond to crisis events, and; (3) encouraging officers to refer individuals experiencing a behavioral health crisis to services in lieu of arrest, when possible. This section describes the components of the CIT model for crisis response in greater detail, highlighting the role of participating agencies in the development and implementation of CIT programs.

Although CIT is a police-driven initiative, successful implementation and ongoing service provision requires community buy-in and strong, ongoing collaborations with community partners to promote community safety (CIT International, 2020; Dupont et al., 2007; Thompson & Borum, 2006; Watson & Fulambarker, 2012). Traditionally, those involved in CIT collaborations include police professionals, behavioral health service providers, and behavioral health service users and advocates (McClure et al., 2017; Watson et al., 2019). These multiagency collaborations are created early in the development of CIT programs to establish clear goals, to define the appropriate role for each participating agency, and to create standardized CIT program policies (Blevins et al., 2014; Dupont et al., 2007; Herrington & Pope, 2014; McClure et al., 2017). These groups are tasked with identifying resources that exist in their community to facilitate effective responses to people experiencing behavioral health crises and with identifying gaps in available services that need to be addressed (McClure et al., 2017).

The training of police personnel is also central to the creation and continued success of CIT programs (Dupont et al., 2007). CIT is a generalist-specialist model, in which a portion of patrol officers participate in CIT-specific training to become specialists in responding to behavioral health crises (Thompson & Borum, 2006). Specialized CIT training typically focuses upon three primary areas: (1) behavioral health awareness and stigma reduction; (2) knowledge of available behavioral health resources in a community, and; (3) crisis de-escalation techniques (Bahora et al., 2008; Morabito et al., 2012; Taheri, 2016). The CIT model also emphasizes training for 911 call-takers and dispatchers to assist in their identification of calls for service involving behavioral health crises. Although some agencies use the same training for officers, 911 call-takers, and dispatchers (Watson & Fulambarker, 2012), separate trainings have been viewed as more effective given the different roles of these professionals (Compton et al., 2010).

For CIT programs to successfully divert individuals experiencing behavioral health crises from the criminal justice system into appropriate services, adequate behavioral health resources need to exist in the community (Reuland & Cheney, 2005). Officers also need to perceive the use of these services as a legitimate response option for individuals in crisis (Watson, 2010). Typically, numerous behavioral health service providers participate in CIT, including mental health professionals, social workers, doctors, counselors, and substance use professionals, to serve as resources for officers responding to crisis events (CIT International, 2020).

Representatives from the behavioral health community are involved in all phases of the CIT program, including development, implementation, and continual efforts (Dupont et al., 2007). Psychiatric nurses and other mental health professionals may also contribute to the development and implementation of CIT training given their clinical experience working with individuals in crisis (Ellis, 2014).

Advocacy groups are also crucial partners in developing CIT programs and are typically involved in every stage of CIT program development and ongoing service provision. These groups consist of individuals living with behavioral health conditions, their family members, and their friends (Dupont et al., 2007). Some of the key advocacy groups that have been involved in CIT are the National Alliance on Mental Illness and the National Mental Health Association, in addition to local advocacy organizations in different jurisdictions (Rogers et al., 2019). Advocates provide critical insight into the challenges facing individuals experiencing behavioral health crises, can help familiarize officers with the experiences of individuals in crisis, and can help with the identification of both needed and available behavioral health services and supports. Advocates also provide important guidance and support for interacting with individuals with behavioral health conditions, with some advocates serving as instructors during CIT training for police officers (Dupont et al., 2007; Vickers, 2000).

C. CIT Implementation across Communities

As noted above, the CIT model is characterized by several key elements, including the development of community partnerships, officer CIT training, and the availability of crisis response services to which officers can refer individuals in crisis. Substantial efforts have gone into outlining the CIT implementation process to guide communities in their of adoption of a CIT program (see Usher et al., 2019, for example). However, the structure of individual CIT programs varies across communities depending on available resources. Table 2, presented below, outlines several CIT components that have been found to vary across communities in their implementation of the CIT model. In turn, Table 3 presents several examples of CIT programs in practice.

In some communities, CIT has been used as a standalone response to behavioral health crises. Others, however, have also adopted co-responder teams and other resources for police officers tasked with addressing crisis incidents. Some jurisdictions limit their CIT program to a single municipality (e.g., Chicago; Watson et al., 2010), while others use broader models at the county (e.g., Oakland County; Kubiak et al., 2017), and even state (e.g., Georgia; Bahora et al., 2008) levels. CIT officers might be directly dispatched to crisis events if dispatchers can identify those events based on a call for service. CIT officers can also serve as secondary responders at the request of other officers or emergency service professionals.

The proportion of patrol officers trained in CIT varies across jurisdictions, but is generally advised to be large enough to meet the needs of the community and to provide full-time CIT coverage (Dupont et al., 2007; Steadman et al., 2000; Watson, 2010). Many agencies train roughly 20-25% of their officers in CIT (Bower & Pettit, 2001). However, smaller agencies may

train a greater proportion of officers to ensure full-time coverage (Dupont et al., 2007). There is also variation in the format of the CIT training itself. Most CIT programs rely on officers who volunteer to participate in a 40-hour training delivered over one week, suggesting that the use of volunteers ensures that the officers trained to respond to behavioral health crises have an appropriate disposition for addressing these incidents. Other agencies mandate some or all of their officers to participate in training, incorporating CIT training into their academy training and continual professional development efforts (McClure et al., 2017). Further still, agencies with staffing restrictions may choose to deliver their training in segments over a longer timeframe.

Table 2. CIT Program Variation

Characteristic	Description
1. Model Implementation	Some CITs are co-located in agencies with other services (e.g., emergency department, outpatient service provider, co-responder teams), while others operate as a stand-alone entity.
2. Program Design	CIT can be operated through a single law enforcement agency, or as part of a county, regional, or state-based model, depending upon the community and available resources.
3. Method of Referral	CIT officers can be notified of crisis incidents in many different ways, including 911 dispatchers or direct requests for assistance from other first responders.
4. Nature of Response	CIT officers may serve as the primary response to calls for service suspected to involve a behavioral health crisis and/or serve as a secondary response after the police have already responded and determined that a CIT intervention is appropriate.
5. Days / Hours of Operation	It is recommended that CIT officers be available to respond to a crisis 24/7. However, this is not always possible in smaller agencies that might need to train a higher proportion of officers to ensure full-time CIT coverage.
6. Amount / Type of Training	CIT training is generally delivered to volunteer officers over one 40-hour week, though the use of volunteers and the training format can vary according to program staffing and available resources.
7. Available Services	CIT officers might have access to 24-hour crisis response centers in some locations, though CIT officers in other communities might rely on partnerships with numerous service providers or be limited to behavioral health services with more limited hours or that only address certain types of behavioral health conditions.
8. Level of Follow-Up Care	CIT programs are pre-booking diversion programs that allow officers to refer impacted individuals to services prior to formal charges being filed; the individual service providers could provide varying levels of follow-up care.

Table 3. CIT Programs in Practice

Site Example: Arapahoe County (CO) Sheriff's Office CIT Program

Program description:

The Colorado CIT program was developed to establish partnerships between law enforcement agencies and healthcare providers to connect individuals in need to public and private services. In Arapahoe County, all deputies receive training to identify mental health conditions and select officers receive an additional 40-hour specialized CIT training. CIT deputies respond to crisis calls involving mental health conditions, co-occurring disorders, and intellectual and developmental disabilities with a co-responder, when possible. When a co-responder is unavailable, the CIT deputy will make a referral to the Behavioral Health Response Program or another partner agency for follow up. Participating partner agencies include the AllHealth Network, Arapahoe County Attorney, Aurora Mental Health, and National Alliance on Mental Illness. CIT-trained deputies also work in the Special Intervention Unit in the Detention/Administrative Services Bureau to work with individuals who are in crisis and incarcerated. The Arapahoe County Sheriff's Office Detention Center also maintains a Mental Health Coordinator responsible for connecting inmates with services.

For more information see https://www.arapahoegov.com/927/Crisis-Intervention-Program

Site Example: Santa Clara County (CA) CIT

Program description:

The Santa Clara County CIT program was created through a collaborative effort between the San Jose Police Department, the Santa Clara County Sheriff, Santa Clara County Mental Health Department, and the National Alliance on Mental Illness (NAMI). The Santa Clara County CIT academy provides a 40-hour training to participating officers, with instructors from Stanford, San Jose State University, Santa Clara Mental Health, the Veteran's Hospital, local behavioral health agencies, and NAMI trained service users and their family members. CIT officers are expected to assist individuals experiencing mental health conditions, intellectual and developmental disabilities, Alzheimer's disease, and substance use. The NAMI Santa Clara County lists specialized officer training as the most important component of their CIT training.

For more information see https://namisantaclara.org/classes/crisis-intervention-team/#

Site Example: Northeast Ohio Medical University (NEOMED), Criminal Justice Coordinating Center of Excellence CIT

Program description:

Ohio's CIT Strategic Plan was written by the Criminal Justice Coordinating Center of Excellence, the Ohio Department of Mental Health and Addiction Services, the National Alliance on Mental Illness of Ohio, the Office of Criminal Justice Services, and the Ohio Attorney General's Office. The strategy is intended to ensure that CIT programs are developed in every county in Ohio with every police agency participating in CIT. The strategic plan has been used to standardize CIT training for officers (32-40 hours) and for dispatchers (6-16 hours) throughout the state.

For more information see https://www.neomed.edu/cjccoe/cit/

Finally, the availability and type of behavioral health services incorporated within CIT programs varies drastically across different communities. For example, some communities have access to 24-hour crisis centers that enact a "no refusal" policy and expedited processing for individuals referred or transferred to the center by police officers (Compton et al., 2008; Vickers, 2000; Watson et al., 2011). In other communities, CIT programs benefit from the availability of many different service provider partners that offer an array of services and support for people living with behavioral health conditions. In other cases, however, the availability of these services are quite limited, restricting the capacity of police officers to divert individuals experiencing behavioral health crises to these resources (Compton et al., 2017; Wells & Schafer, 2006). Relatedly, variation in the type of service providers in a CIT collaboration suggests different levels of follow-up care may be offered to individuals referred to these services by CIT officers.

III. The Impact of Crisis Intervention Team Training

Much of the available research on CIT has been dedicated to the examination of the effects of CIT training on officers' knowledge, attitudes, and self-reported or actual behaviors. As mentioned previously, CIT training typically focuses upon three primary areas designed to improve police responses to individuals in crisis: (1) behavioral health awareness and stigma reduction; (2) knowledge of available behavioral health resources in a community, and; (3) crisis de-escalation techniques (Bahora et al., 2008; Morabito et al., 2012; Taheri, 2016). This section discusses the observed effects of training on outcomes related to each of these areas.

A. Behavioral Health Awareness and Stigma Reduction

It is suggested that educating CIT officers on behavioral health and the experiences of individuals living with behavioral health conditions can increase the safety of police-citizen encounters by enhancing officers' understanding of individuals in crisis and by building officers' confidence in interacting with individuals during these events. Specifically, improving an officer's ability to identify individuals experiencing a behavioral health crisis could reduce the potential for officers' use of force in those interactions (Morabito et al., 2012).

Improvements in officer knowledge about and attitudes toward individuals experiencing behavioral health crises has been the subject of a large number of studies using pre- and post-CIT training surveys. These studies, reviewed below, provide primarily positive findings, causing some researchers to suggest that CIT training is an evidence-based practice for improving officers' understanding of and views toward individuals with behavioral health conditions (Watson et al., 2017). It is important to note that, although CIT training may also include education on topics related to veterans, homelessness, IDD, or other situations officers might face in their respective jurisdictions (Bower & Pettit, 2001), little research has examined the impact of this education on officers knowledge of and attitudes toward these populations.

1. Officer Knowledge of Behavioral Health

Within the available literature, several studies have found that CIT training significantly improves officer knowledge of the causes and signs of behavioral health conditions (Compton et al., 2014a; Cuddeback et al., 2016; Demir et al., 2009; Ellis, 2014; Herrington & Pope, 2014; Strauss et al., 2005). For example, officers who participated in CIT training in the state of Georgia reported an improved ability to recognize and respond to individuals experiencing behavioral health crises (Bahora et al., 2008; Hanafi et al., 2008). Additionally, research conducted in Louisville, Kentucky suggests that CIT officers are able to accurately identify individuals experiencing behavioral health crises, providing appropriate referrals to psychiatric emergency services (Strauss et al., 2005). Some studies have found that the benefits of CIT programs can spread into other areas of the agency that do not have CIT through institutionalizing appropriate responses to behavioral health crises (Herrington & Pope, 2014). For example, the Houston, Texas Police Department has reported improved knowledge of mental health conditions for all officers, not just those specifically trained in CIT (Reuland & Cheney, 2005). Notably, however, some researchers have found that officer knowledge of behavioral health significantly decreases in the months following CIT training, suggesting the importance of continued education to maintain officers' knowledge (Compton & Chien, 2008).

2. Officer Confidence in Crisis Response

In addition to knowledge attainment, several studies have found that CIT-trained officers report greater confidence in interacting with individuals experiencing behavioral health-related crises than non-CIT officers, including studies in Georgia (Bahora et al., 2008; Compton et al., 2006, 2014a; Hanafi et al., 2008); Memphis, Tennessee (Borum et al., 1998); Florida (Davidson, 2016), North Carolina (Cuddeback et al., 2016); Chicago, Illinois (Canada et al., 2012); Ohio (Bonfine et al., 2014); Lafayette, Indiana (Wells & Schafer, 2006); and New South Wales Australia (Herrington & Pope, 2014). In a midwestern city, for example, only 26% of officers reported feeling at least moderately comfortable responding to an individual in crisis prior to receiving CIT training, compared to 97% of officers one year after CIT training had been implemented (Ritter et al., 2010). In contrast, CIT trained officers in Florida experienced decreased confidence in their abilities to respond to an individual in crisis from immediately after the training to one month after the training (Davidson, 2016).

3. Impact of Training Format on Officer Knowledge & Confidence

Expanding our understanding of the impact of CIT training further, some researchers have examined whether the format of training affects officers' knowledge and confidence. For instance, researchers have considered differences in training experiences and outcomes between volunteer officers and officers mandated to participate in CIT. This research suggests significant baseline differences may exist between CIT volunteer officers and their non-volunteer counterparts. Prior to CIT training, for example, volunteers in Georgia had greater exposure to the mental health field, higher levels of support for helping individuals experiencing behavioral health crises, and higher levels of educational attainment than officers who were required to participate in CIT training. However, there were no significant differences between volunteers and mandated officers in their empathy for individuals experiencing

behavioral health crises (Bahora et al., 2008; Compton et al., 2017). Furthermore, although volunteers and officers assigned to CIT training scored equally well on knowledge about mental health conditions *after* CIT training, volunteer officers reported significantly higher levels of confidence in their ability to respond to a crisis and support for using de-escalation than officers who were assigned to participate in CIT training (Compton, Bakeman, et al., 2017). Based on their findings, Compton and colleagues (2017) recommend the use of volunteer officers to maximize the benefits of CIT training programs.

Comparisons between volunteers and non-volunteers have also been conducted in other locations. For example, Florida police and correctional officers who were mandated to attend CIT training experienced a 13% increase in knowledge about mental health conditions, a significantly greater increase than CIT volunteers who experienced a 9% increase, suggesting that these trainings might be more beneficial for officers who do not volunteer (Davidson, 2016). A separate study in North Carolina examined differences between CIT volunteers and non-volunteers, in addition to differences between the traditional 40-hour week-long CIT training and a segmented CIT training delivered by the same trainers over three months. They did not identify any significant differences in attitudes or knowledge between officers who volunteered and those who were mandated to participate in CIT or between officers who received the segmented training compared to those who received the traditional training (Cuddeback et al., 2016).

B. Knowledge of Available Behavioral Health Resources

One of the most important aspects of training is ensuring that CIT officers are aware of the services available for individuals experiencing behavioral health crises. CIT training involves presentations from local behavioral health service providers and site visits to available services. These trainings also often include information about policies officers should follow when transporting individuals in crisis to available inpatient and outpatient treatment providers (Dupont et al., 2007; Herrington & Pope, 2014).

Several studies have examined the impact of CIT training on officers' knowledge of behavioral health resources available in their jurisdiction. For example, officers surveyed in Ohio (Bonfine et al., 2014) and Florida (Davidson, 2016) reported that CIT trainings were helpful for identifying behavioral health resources in their community. Relatedly, correctional officers in Missouri had improved perceptions of the behavioral health services they could access after being trained in CIT (Canada et al., 2020). These CIT officers also had more positive perceptions of the services they could use compared to non-CIT officers in that agency (Canada et al., 2020). CIT officers in Lafayette, Indiana also reported significantly better understanding of the policies surrounding treatment referral, transporting individuals to service providers, and completing required paperwork associated with behavioral health-related crises (Wells & Schafer, 2006).

Preliminary research suggests officers' perceptions of behavioral health services in their community may impact their willingness to use them in their work. Specifically, Watson and colleagues (2010) compared treatment referrals completed by volunteer and mandated CIT

officers who reported different levels of support for mental health services in Chicago. Watson and colleagues (2010) found no differences in treatment referrals between CIT and non-CIT officers who held negative views toward mental health services. However, CIT officers with neutral and positive perceptions of mental health services were significantly more likely to refer individuals to services than non-CIT officers who held neutral or positive perceptions (Watson et al., 2010). They conclude that CIT is unlikely to change referral behaviors for officers who do not support mental health treatment, but that CIT is effective for officers who are neutral or positive toward referring individuals to mental health services (Watson et al., 2010). A separate study in Georgia identified similar findings. CIT volunteers reported significantly higher levels of support for referring individuals to services than officers mandated to participate in CIT (Compton, Bakeman, et al., 2017), further reinforcing the benefits of using volunteers.

C. Perceptions & Self-Reported Use of De-escalation Techniques

Another key component of CIT training is to provide officers with the skills to de-escalate crisis events in order to prevent the use of force and to reduce the likelihood of injury to citizens and officers. Although research in this area is less common, several studies have examined the impact of CIT training on officers' support for and self-reported use of de-escalation techniques during crisis incidents. For example, Compton and colleagues (2014a) found CIT officers in Georgia were significantly more favorable toward the use of de-escalation than officers who were not trained in CIT. Additionally, CIT training was found to significantly increase Florida police and correctional officers' perceptions of the utility of de-escalation immediately following the CIT training. Notably, however, the increased support for de-escalation declined by 28% one month after the training (Davidson, 2016).

Other studies have examined officer self-reported use of de-escalation. For example, Compton and colleagues (2011) conducted a vignette study in an urban southeastern US police department to examine officer perceptions of the utility of de-escalation techniques. They found that CIT officers were significantly more likely to report de-escalation as an effective response to an individual in crisis than non-CIT officers, suggesting that CIT training can increase officer acceptance of these techniques (Compton et al., 2011). Similarly, CIT officers in Chicago promoted the use of communication as a de-escalation strategy to resolve behavioral health crises through listening to the impacted individual and giving them time to resolve the crisis (Canada et al., 2012). CIT officers in another agency self-reported being more likely to use open-ended questions, to use mirroring, and to avoid aggressive behaviors that could trigger an individual in crisis than officers who were not trained in CIT (Kubiak et al., 2017).

In a mixed-method study conducted in the New South Wales Police Force, researchers examined both officer self-reported use of de-escalation and actual use of de-escalation techniques when responding to crises. They found that de-escalation techniques were significantly more likely to be used in police-citizen interactions when a CIT officer was present at the incident. CIT officers further reported that they spent more time talking to individuals in crisis after receiving training, as opposed to immediately transporting the individual to the hospital or jail (Herrington & Pope, 2014). CIT officers also mentioned that they felt more

patient after training, suggesting that their ability to slow down their response to crisis incidents aided in the reduction of injuries because individuals were more compliant and willing to follow verbal commands without physical force (Herrington & Pope, 2014).

Collectively, the research findings suggest that CIT training may be effective in increasing officers support for and use of de-escalation techniques in response to individuals experiencing behavioral health crises. The reduction in training effects over time, however, supports the need for continuing CIT education to ensure that officers do not lose the skills they have gained. Furthermore, as a single component of a multi-faceted training curriculum, it is difficult to ascertain whether changes in officers' attitudes and use of force can be attributed to the de-escalation skills presented within the curriculum. Given the increasing use of de-escalation training across police agencies, additional research examining the effects of this type of training on officers' attitudes and behavior is needed (Engel et al., 2020).

IV. The Impact of Crisis Intervention Team Programs

Although training is the most commonly evaluated component of the CIT model, training officers without creating collaborative partnerships with behavioral health service providers is unlikely to enhance long-term outcomes for individuals who experience behavioral health crises, to effectively reduce pressure on the criminal justice system, or to achieve cost savings (McClure et al., 2017). Seeking to expand our understanding of programmatic outcomes, some researchers have examined the implementation and impact of CIT programs across communities. Similar to the research on CIT training, evaluations of CIT programs have focused primarily on outcomes pertaining to individuals experiencing behavioral health crises. In contrast, little research has examined the impact of CIT on individuals with IDD, although there is some evidence that CIT officers interact with individuals with IDD in their response to crisis incidents (see Compton et al., 2014b).[1] This section considers the research examining the impact of CIT programs on individuals' connection to behavioral health services, the de-escalation of crisis incidents, pressure on the criminal justice system, and costs associated with behavioral health crises.

A. Increasing Connections to Services

Enhancing individuals' connection to appropriate services in an efficient manner is a primary goal of CIT programs. Research examining the effects of CIT provides some evidence that CIT programs facilitate access to services and relevant resources. Specifically, although the rate of referral may vary across communities, evaluations of CIT suggest referral to services is a common disposition for incidents managed by CIT officers and that referrals typically increase

[1] CIT officers in Georgia reported that 40% of all incidents that they responded to involved an individual with a mental illness, 10% involved an individual experiencing both a mental illness and substance use, 34% involved substance use alone, and 16% involved individuals with a developmental disability (Compton et al., 2014b). In their evaluation of the outcomes of crisis events depending on the individuals' diagnosis, the authors combined individuals with disabilities into an 'other' category, making it difficult to understand the impact of CIT on individuals with IDD.

following the implementation of CIT programs (see Steadman et al., 2000). For example, a study in one Midwest county found that referrals to crisis centers increased by over 25% after CIT was implemented within the community (Kubiak et al., 2017). This increase remained significantly higher than the pre-implementation numbers for almost seven months (Kubiak et al., 2017).

Further evidence of the impact of CIT on referral to services is provided by examinations of differences in the rate of referral between CIT and non-CIT officers. For example, Teller and colleagues (2006) found CIT officers in Akron, Ohio transported a significantly greater proportion of individuals to emergency psychiatric services (30%) than non-CIT officers (27%). Similarly, Georgia CIT officers were significantly more likely to report referring individuals experiencing behavioral health conditions to services (40% compared to 29% for non-CIT officers) and were significantly less likely to resolve incidents using arrests (Compton et al., 2014b). Further, a comparison of CIT and non-CIT officers in Chicago found that non-CIT officers generally felt the only options for responding to an individual in crisis are arrest or transportation to the hospital. In contrast, CIT officers identified referral to community-based services as a realistic option in the management of crisis incidents (Canada et al., 2012).

Evaluations employing more methodologically rigorous research designs support the findings of the descriptive studies described above, suggesting CIT officers are more likely to resolve crisis incidents through transport and referral to services than their non-CIT counterparts. For example, in their examination of CIT outcomes in Chicago, Watson and colleagues (2010) found CIT officers directed 18% more of the individuals they interacted with to services than non-CIT officers working in the same districts who responded to the same types of calls (Watson et al., 2010). Their findings suggest that CIT is particularly effective in diverting individuals engaged in behaviors that were unlikely to result in arrest. Additionally, CIT officers were significantly more likely to refer individuals who exhibited low to moderate levels of resistance to services than their non-CIT counterparts, although there were no significant differences in referrals for individuals displaying high levels of resistance.

A separate study in Chicago similarly found that CIT officers directed a greater proportion of individuals with mental health conditions to services than non-CIT officers, especially in districts with more readily available mental health resources (Watson et al., 2011). Furthermore, although CIT and non-CIT officers in districts with fewer resources did not respond to incidents differently, those officers in districts with a culture supportive of CIT were more likely to refer individuals to mental health services. As such, both the availability of resources and a culture promoting the use of CIT appear relevant to the success of these programs.

Notably, the available research suggests the referral and transport to behavioral health services produced by CIT programs improves longer-term outcomes for service users (i.e., outcomes beyond the disposition of the crisis incident). For instance, individuals who received pre-booking diversion services in Memphis, Pennsylvania, and Portland were significantly more likely to take their medications and to experience mental health hospitalization than individuals who were not diverted (Broner et al., 2004). Individuals in Memphis specifically attended a greater number of counseling sessions relative to individuals who were not diverted to

emergency services from traditional criminal justice responses. In a separate study in Memphis, CIT was associated with a significant improvement in psychiatric symptoms for individuals diverted from jail in the following three months (Cowell et al., 2004). Further, there was no significant increase in the likelihood of rearrest, alcohol use, or drug use for the individuals who were diverted.

Importantly, the generalizability of the findings presented above must be considered in light of the effects of the availability of behavioral health resources in the community. Specifically, the capacity of CIT programs to enhance individuals' connection to services will be dictated by the availability of those services (see Watson et al., 2011). The most successful examples of CIT are typically situated in jurisdictions where the police have access to 24-hour crisis centers with an "open-door" policy for officers (see e.g., the Memphis CIT model; Reuland & Cheney, 2005; Vickers, 2000). When such resources are unavailable, inconvenient, or challenging for officers' use, the efficient linkage of individuals experiencing behavioral health crises to appropriate services is likely to suffer (Wells & Schaefer, 2006). As such, identifying and addressing barriers to successful transport and referral to services is important to maximize the impact of CIT programs (McClure et al., 2017; Reuland & Cheney, 2005).

B. Enhancing Crisis De-escalation

Enhancing crisis de-escalation by means of reducing the frequency and severity of officers' use of force and the potential for injuries in crisis incidents are key objectives of CIT programs. However, research examining the impact of CIT on use of force and injuries in behavioral health crisis incidents is relatively limited and is largely descriptive in nature. Specifically, research has identified varied effects of CIT on these outcomes in different places, with some studies finding reductions in use of force and injuries and other studies finding null effects. Further, many of these studies rely on officer self-report data and responses to vignettes, as opposed to administrative use of force data. The available research is described in greater detail below.

1. Officer Use of Force

Several research studies report positive effects of CIT programs on officers' use of force in crisis situations. For example, the Memphis CIT program resulted in reductions in police use of deadly force and a reduced use of restraints (Vickers, 2000). Similarly, the number of police shootings involving individuals experiencing a behavioral health crisis in Albuquerque has declined since the implementation of CIT despite a growing residential population (Bower & Pettit, 2001). CIT officers in Chicago were significantly less likely to use force against individuals who exhibited resistant behaviors than non-CIT officers (Morabito et al., 2012). Georgia officers trained in CIT were significantly more likely to self-report that verbal persuasion was the highest level of force used in their recent encounters with individuals experiencing a mental health crisis than non-CIT officers (Compton et al., 2014b).

Some researchers have identified mixed effects of CIT on use of force in crisis situations. For example, there were no differences in the use of force between CIT and non-CIT officers in

Chicago. However, officers working in districts with a high saturation of CIT resources were less likely to use force than those assigned to districts with less CIT saturation (Morabito et al., 2012). A separate vignette study comparing CIT and non-CIT officers' responses to individuals experiencing behavioral health crises identified insignificant differences between CIT and non-CIT officers for two of the three scenarios examined in a Southeastern US agency (Compton et al., 2011). However, in the scenario involving the most agitated suspect, CIT officers were significantly less likely to report that they would use physical force than non-CIT officers (Compton et al., 2011).

Other studies have found no relationship between CIT and officers' use of force in crisis incidents. A meta-analysis of five CIT evaluations did not find significant reductions in the use of force for CIT officers compared to non-CIT officers (Taheri, 2016). Additionally, researchers found no significant differences in the likelihood of force between CIT and non-CIT officers responding to mental health calls in New South Wales (Herrington & Pope, 2014) or Chicago (Morabito et al., 2012). Notably, one study found that CIT volunteers were significantly more likely to use force than officers who were mandated to participate in CIT training (Compton, Bakeman, et al., 2017). However, CIT volunteers were also significantly more likely to refer individuals to services in encounters that involved physical force than their non-volunteer counterparts. The authors attributed this finding to CIT volunteers' use of force in the transport of subjects to services (Compton, Bakeman, et al., 2017). Notably, "use of force" within this study was a single measure comprised of a wide array of actions by officers, including the use of handcuffs, physical engagement (e.g., pushing, hitting, grabbing), and the use of physical maneuvers or devices to manage the situation. This combined measurement precludes the distinction of the type of force used by volunteer CIT officers. Furthermore, the authors do not provide context regarding agency policies and procedures in these situations. It is possible estimates of use of force may be affected by policies related to officer interactions with individuals in crisis (e.g., policies that require individuals who are transported by the police be handcuffed).

2. Citizen and Officer Injuries

Fewer studies have examined the impact of CIT programs on rates of citizen and officer injuries in crisis incidents (Rogers et al., 2019; Taheri, 2016). Although some studies have reported reductions in injuries using descriptive methods and officer self-reports, others identify no relationship between CIT and injuries. The Memphis CIT program has been associated with fewer injuries to officers and citizens (Vickers, 2000). Minneapolis similarly experienced a reduction in shootings involving individuals experiencing mental health conditions after the adoption of CIT (Reuland & Cheney, 2005). Several officers in Georgia reported that CIT gave them the de-escalation skills needed to reduce citizen and officer injuries, often emphasizing the importance of communication and putting individuals at ease (Hanafi et al., 2008). Additionally, fewer than 1% of interactions between Albuquerque CIT officers and citizens resulted in a citizen injury (Bower & Pettit, 2001).

Alternatively, there was no impact of CIT on officer or citizen injuries identified in Chicago (Kerr et al., 2010). However, injuries were rare in all police encounters involving individuals with mental health conditions, regardless of whether the officer was CIT trained (Kerr et al., 2010). Further, their study found that injuries were most likely to occur when citizens displayed high levels of resistance, suggesting that officers may have limited options to reduce injuries in some encounters, regardless of CIT training (Kerr et al., 2010). In New South Wales, officers reported that the use of de-escalation tactics reduced injuries; however, an analysis of administrative data did not identify any significant differences in the likelihood of an injury between CIT and non-CIT officers (Herrington & Pope, 2014). However, the authors noted that most injuries that occur during behavioral health crises are self-inflicted and are not caused by the responding officer (Herrington & Pope, 2014).

C. Reducing Pressure on the Criminal Justice System

Improving relationships between the police and the behavioral health community is expected to reduce the use of criminal justice resources for responding to behavioral health-related crises. Providing alternative response options to arrest is a key aim of CIT programs (Vickers, 2000). Several studies have examined the impact of CIT on arrests, although findings have been mixed. Another anticipated benefit of CIT is reducing the amount of time officers devote to resolving these incidents. This section reviews prior research in each of these areas.

1. Arrests

One of the key goals of CIT is to reduce officers' reliance on arrests in response to individuals experiencing a behavioral health crisis. Research examining the impact of CIT on arrests has produced relatively mixed findings across studies, with some finding reductions in arrests associated with CIT and others finding no effects. Several studies have found that CIT officers conduct fewer arrests than non-CIT officers. For instance, in Louisville, CIT incidents resulted in arrest in just 2.1% of calls, compared to 6.1% of all calls (El-Mallakh et al., 2008, 2014). Similarly, Compton and colleagues (2014b) found Georgia CIT officers self-reported using arrests significantly less often (13% of incidents) than non-CIT officers (24% of incidents). Additionally, Albuquerque CIT officers used arrest to resolve less than 10% of the behavioral health-related incidents to which they responded (Bower & Pettit, 2001).

Other studies have found no significant relationship between CIT and arrests. For instance, a meta-analysis examining the impact of CIT on arrests in six studies did not identify any difference in arrests between CIT and non-CIT officers (Taheri, 2016). However, Taheri (2016) found that the manner in which arrests were measured influenced the results, with studies relying on self-reported arrest behaviors indicating a greater decrease in arrests than studies using official arrest records. CIT was also unrelated to arrests in Chicago (Watson et al., 2010, 2011) and Akron (Teller et al., 2006). Lafayette, Indiana CIT officers reported viewing arrest as the only way to get someone experiencing a behavioral health crisis off the street (Wells & Schafer, 2006). As such, for CIT to reduce the use of arrests to respond to individuals in crisis, officers need to have other options available to resolve individual incidents.

Some research suggests that the impact of CIT on arrest could depend on the manner in which CIT officers are selected. For example, Georgia officers who volunteered to participate in CIT training were less likely to arrest individuals experiencing behavioral health crises than officers who were assigned to CIT training (Compton, Bakeman, et al., 2017).

Other research has compared the impact of CIT on arrests to other diversion methods. One study of multiple pre-booking and post-booking diversion programs found that CIT may reduce subsequent arrests of individuals with behavioral health conditions by connecting them to services (Broner et al., 2004). Another study compared the Memphis CIT model to a community service officer response team program in Birmingham. They found that Memphis CIT officers conducted arrests in only 6% of the mental disturbance calls, a significantly lower percentage than community service officers in Birmingham who conducted arrests in 13% of incidents (Steadman et al., 2000). Importantly, the lower likelihood of arrest in behavioral health crises occurring in Memphis is likely affected by the availability of a 24-hour crisis triage center (Steadman et al., 2000). The reduced reliance on arrest in Memphis also resulted in a decline in the number of individuals sent to jail, further reducing pressure on the criminal justice system (Vickers, 2000).

2. Officers' Time Spent Managing Calls for Service

Enhancing relationships between the police and behavioral health providers is expected to reduce the amount of time officers spend resolving crisis incidents. For example, in Memphis, strong police relationships with a full-time drop-off center with an expedited intake process for individuals referred by the police enabled CIT officers to return to routine patrol within fifteen minutes (Compton et al., 2008; Vickers, 2000; Watson et al., 2011). Some agencies have also reduced reliance on police officers for transporting individuals experiencing a behavioral health crisis to treatment through partnering with ambulance services, a practice that increases safety for all and substantially reduces the amount of time officers spend responding to these incidents (Herrington & Pope, 2014). This also reduces the potential to agitate an individual in crisis through avoiding transportation in a caged patrol vehicle (Herrington & Pope, 2014). Further, individuals diverted from the criminal justice system and into treatment services through CIT programs are not subject to continued criminal justice oversight due to an absence of formal charges (Lattimore et al., 2003). However, this can create challenges in ensuring continued treatment compliance by these individuals in the community (Reuland, 2010; Reuland & Cheney, 2005).

D. Promoting Cost-Effectiveness

The widespread adoption of the CIT model has been attributed to the cost-effectiveness of CIT programs (El-Mallakh et al., 2014). Costs associated with police interactions with individuals experiencing behavioral health crises stem from multiple areas. In the criminal justice system, these costs occur for the police who respond to these incidents, jails that are used to house individuals, and the courts that process cases involving individuals living with behavioral health

conditions (Cowell et al., 2004). Given that these individuals might come into contact with the criminal justice system multiple times, these costs could be incurred numerous times for the same individuals (Cowell et al., 2004). Costs are also incurred by the health care system, including inpatient mental health treatment facilities, residential substance use programs, outpatient care, emergency rooms, and case management services that are used to assist these individuals (Cowell et al., 2004). Cost savings associated with CIT have been attributed to allocating resources to address the needs of individuals living with behavioral health conditions earlier, rather than waiting for the escalation of a crisis incident (Rogers et al., 2019).

A few studies have evaluated the cost-effectiveness of CIT, generally suggesting that these programs can have financial benefits for the criminal justice and health care systems despite substantial costs associated with implementing these programs. For example, some researchers have estimated that the Memphis CIT program costs roughly two dollars per response to a behavioral health crisis call (Thompson & Borum, 2006). A cost-effectiveness study of CIT in Louisville found that CIT resulted in an annual savings of $1,024,897, primarily due to reduced inpatient jail referrals, deferred hospitalizations, and avoided jail time (El-Mallakh et al., 2014). CIT-related hospitalizations were the most expensive component of the program, costing almost $1.8 million annually. However, reduced jail referrals to hospitals saved an annual $2.3 million, easily offsetting the cost. These cost savings are most beneficial for Medicare and Medicaid, which finance hospitalization for most individuals experiencing severe mental illness. Notably, however, while the Louisville Police Department pays substantial training costs for officers to participate in CIT, the agency does not reap the rewards in savings to the department directly (El-Mallakh et al., 2014). Still, there is some evidence of cost savings for police agencies. In Albuquerque, for instance, the implementation of CIT resulted in cost-savings for the department through reduced reliance on SWAT to respond to crisis situations, eliminating the need for expensive overtime (Bower & Pettit, 2001). Prior research in Louisville similarly found that CIT reduced the number of hostage negotiation team requests (El-Mallakh et al., 2008).

A multisite cost-effectiveness evaluation of several diversion programs, including Memphis CIT, found that, although jail costs tend to be lower for diverted individuals, health care costs are higher (Cowell et al., 2004). Jail costs for individuals diverted in Lane County, Oregon, for example, were $5,886, compared to $9,925 for individuals who were not diverted. In Memphis, diverted individuals had an average healthcare cost of $9,013, compared to $2,192. These costs were largely related to inpatient mental health treatment. Memphis additionally experienced an insignificant $384 reduction in jail costs for diverted individuals compared to non-diverted individuals. Overall, the Memphis pre-booking diversion program was associated with a total cost increase of $6,576. Although the Memphis model is expensive, the results indicate that each additional $1,236 spent on the program results in a one-point improvement in impacted individuals scores on the Colorado Symptom Index in the following three months, suggesting that these programs are resulting in improved outcomes for impacted individuals (Cowell et al., 2004).

V. Stakeholders' Perceptions of Crisis Intervention Team Programs

One of the most commonly studied aspects of CIT programs are stakeholder perceptions, with a substantial body of research examining officer perceptions of CIT. Less research has examined perceptions among participating partner agencies or service users. This section will discuss the research findings in each of these areas.

A. Police Officer Perceptions

Officers have reported that behavioral health conditions pose a moderate problem for their police agency (Bonfine et al., 2014; Wells & Schafer, 2006), with some officers citing this concern as their motivation for participating in a CIT training (Bahora et al., 2008). Interviews conducted with CIT and non-CIT officers and supervisors in Chicago found that all personnel perceived positive benefits of CIT implementation within the districts in which they worked (Canada et al., 2012). CIT trained officers reported that the training helped them better understand why an individual might behave in certain ways and to more fully assess whether those individuals posed a threat to themselves or others.

Relative to officers in agencies that use co-response teams or in-house social workers, Memphis CIT officers were significantly more likely to believe that their department is effective at meeting the needs of individuals experiencing behavioral health-related crises, diverting impacted individuals from jail, minimizing officer time spent responding to behavioral health-related calls, and achieving community safety (Borum et al., 1998). A separate study in a midwestern US city similarly found that officers were significantly more likely to perceive their agency as effective in meeting the needs of individuals impacted by mental health conditions and keeping those individuals out of jail after receiving CIT training (Ritter et al., 2010). New South Wales officers who participated in interviews reported that the program strengthened relationships between the police and mental health service providers (Herrington & Pope, 2014). These officers additionally reported that individuals in crisis are much calmer during transport than they were prior to the CIT training, highlighting the importance of using de-escalating techniques when responding to crisis events (Herrington & Pope, 2014).

B. Partner Agency Perceptions

Although several studies have examined officer perceptions of CIT programs, fewer have examined the perceptions of participating behavioral health partners (Thompson & Borum, 2006). Still, the available research suggests that behavioral health professionals perceive several benefits of CIT programs in their community. For example, mental health workers in New South Wales reported improved police interactions with individuals experiencing mental health conditions after the CIT program was deployed (Herrington & Pope, 2014). Behavioral health service partners in Memphis reported that CIT has resulted in a reduction in patient violence and in the provision of better information to behavioral health service providers from the police (Vickers, 2000). Other studies have similarly found that clinicians responsible for working with CIT officers have positive perceptions of these programs (Reuland, 2010). These

mental health professionals reported increased perceptions of police credibility based on their interactions with CIT officers (Reuland, 2010). Given the centrality of strong police-behavioral healthcare specialist relationships to the CIT model, additional research examining perceptions of CIT among these partners is needed.

C. Service User Perceptions

Understanding the impact of CIT on individuals who experience behavioral health crises is critical to ensuring the program effectively serves its target population. Studies have generally found that service users are favorable toward these programs (Reuland, 2010; Reuland & Cheney, 2005). Individuals living with mental health conditions interviewed in New South Wales reported that the way police officers talk to them makes a big difference, with supportive and helpful communication being more effective than being rushed into a police car (Herrington & Pope, 2014). They further reported that aggressive police responses can increase their crisis levels, because it feels like what they are afraid of happening is already happening (Herrington & Pope, 2014). A separate study highlighted the fact that even the presence of a uniformed officer can exacerbate an individual's state of crisis, though consumers of behavioral health services were more likely to perceive CIT officers to be helpful and to be less fearful of CIT officers (Reuland, 2010).

After the implementation of a CIT program in Akron, Ohio, individuals living with behavioral health conditions and their family members reported a greater likelihood of calling the police for help (Teller et al., 2006). Individuals living with behavioral health conditions and their family members in Houston and Baltimore County also reported being impressed by CIT officers' displays of empathy and knowledge of medications (Reuland & Cheney, 2005). Beyond individuals directly impacted by these programs, the CIT program in Florence, Alabama was associated with increased community awareness of behavioral health conditions, resulting in more accurate requests for police services to respond to individuals in crisis (Reuland & Cheney, 2005). Individuals with diagnosed behavioral health conditions in Georgia were provided an opportunity to consent to participate in a linkage program that allows police officers to access the participants' relevant behavioral health history (Compton, Halpern, et al., 2017). Patients who participated in these programs were overwhelmingly favorable, suggesting that the use of the linkage program reduced their experiences of arrest (Compton, Halpern, et al., 2017). Patients were also appreciative that the system includes notes about their medications, which reduces the length of time they wait to receive medication even if they are arrested (Compton, Halpern, et al., 2017). These individuals often reported that being transported to jail made their situations worse, and were supportive of any attempt to get them back into treatment or on medication (Compton, Halpern, et al., 2017). As such, the use of a CIT strategy that prioritizes diversion from arrest and facilitates access to services can address these concerns.

VI. Discussion

CIT programs involve training patrol officers to effectively respond to behavioral health crises and to refer individuals to services, as opposed to relying on arrest. These programs are

intended to achieve multiple goals, including: improving officer knowledge of behavioral health conditions, improving officer awareness of available behavioral health services, enhancing officer awareness of de-escalation techniques, increasing individuals' connections to behavioral health services, enhancing crisis de-escalation, reducing pressure on the criminal justice system, and achieving cost savings.

CIT is widely regarded as an effective model for crisis response and has been adopted in numerous agencies throughout the world. However, considerable variation in the availability of community resources can affect the success of these programs. Although a substantial body of research suggests that CIT training is successful in changing officer attitudes surrounding behavioral health crises, future research will need to determine whether these attitudinal changes translate into improved crisis response in practice (Ritter et al., 2010). Further, most of the research in this area is descriptive in nature and is limited to individuals experiencing a behavioral health crisis, with fewer studies examining the use of CIT to respond to individuals with IDD. More rigorous evaluations should be conducted to clarify the impact of CIT on intended outcomes for individuals experiencing crises caused by different factors.
Table 4 presents a summary of the findings of research evaluating CIT training and program outcomes. The practical implications of these findings and future research directions are discussed below.

A. Practical Implications

The review above identifies several practical implications that should be considered in understanding the impact of CIT. Namely, the implementation of CIT depends on partnerships between the police and behavioral health service providers and other community partners to improve responses to individuals experiencing a crisis. Further, the type and availability of behavioral health services in a community will influence the impact of a CIT program. Finally, ensuring that CIT programs achieve their intended goals depends on continually assessing their impact in the community and refining the programs based on these findings.

As mentioned throughout the review, the success of CIT depends on strong relationships between the police and behavioral health services providers. Identifying and including behavioral health specialists in every phase of CIT, from implementation through continual program refinement, is crucial to the success of this model. However, researchers who examined the implementation of CIT programs in several Florida agencies found that service providers largely place the burden of CIT on the police (Thompson & Borum, 2006). These behavioral health agencies can overemphasize the importance of officer training without changing their current operating practices to ensure that police referrals to behavioral health services are more efficient (Thompson & Borum, 2006). The use of CIT programs can additionally increase the volume of cases received by behavioral health service providers, which might result in a need for increased resources for these service providers (Reuland, 2010). Funding has consistently been cited as one of the greatest challenges to CIT programs, especially by behavioral health agencies which experience regular resource constraints and less consistent budgets than criminal justice agencies (Herrington & Pope, 2014; Reuland & Cheney,

2005; Rogers et al., 2019). Identifying anticipated cost savings (e.g., reduced jail time, reduced use of hospital services) for each participating agency can help guide discussions and ensure that agencies view their roles in responding to crises as mutually supportive (Kane et al., 2018; McClure et al., 2017).

One of the most common concerns about CIT is the suitability of these programs for responding to behavioral health crises in small or rural areas that may have limited police and behavioral health resources. CIT is meant to be tailored to the local context to address these varying resources and needs across communities (Watson et al., 2017). In order to achieve continuous CIT staffing, smaller agencies with fewer officers working each shift might need to train a greater proportion of their officers than larger agencies (Thompson & Borum, 2006). Additional resource constraints in the community can also influence the success of these programs. For instance, one of the most successful components of the Memphis CIT model has been the availability of a full time drop-off center with a no refusal policy, an option that might not be feasible for every jurisdiction that wishes to develop a CIT program (Compton et al., 2010). These limitations can be related to a lack of available resources, an unfavorable policy environment, and/or poor cooperation from local behavioral health service providers (Compton et al., 2010). These concerns can be especially salient in small communities. To address these concerns, regional CIT programs have been adopted in some jurisdictions to provide adequate resources to support this response model. In other places, the development of a single crisis evaluation center is not possible due to the size of the city, resulting in the need for a network of behavioral health service providers (Compton et al., 2010).

Similar to other programmatic efforts seeking to produce real change, for CIT to be effective the program goals must be specific and measurable to facilitate continual assessment and refinement of activities (McClure et al., 2017; Reuland & Cheney, 2005). Assessing whether goals are being achieved requires collecting data about the number of incidents involving individuals experiencing a behavioral health crisis, the number of CIT officers dispatched to these incidents, the outcomes of those incidents, and the time and costs incurred/saved through CIT officer responses to those incidents (Blevins et al., 2014; Reuland & Cheney, 2005). These data collection mechanisms and a plan for continually assessing program-related outcomes should be developed early in the implementation of a CIT program (Dupont et al., 2007; McClure et al., 2017). Representatives from several CIT programs have reported that continued ability to demonstrate programmatic success through routine analysis of CIT-related outcomes has improved community and stakeholder support for these programs (Reuland & Cheney, 2005).

Table 4. Summary of Findings from Evaluations of CIT Training & Programs

Outcome	Findings
Behavioral Health Awareness & Stigma Reduction	Several studies have examined the impact of CIT training on officer knowledge of behavioral health. These studies typically involve administering officer surveys before and after training to assess changes in knowledge and attitudes. Most studies find that training improves behavioral health awareness and reduces stigma toward individuals experiencing behavioral health crises.
Knowledge of Available Services	A few studies have examined whether CIT training increases officer awareness of available behavioral health services. Relying primarily on qualitative methods (e.g., interviews with officers), these studies suggest that training improves officer awareness of the availability of services and the policies for referring and transporting individuals experiencing a crisis to these services.
Use of De-escalation Techniques	Researchers have examined whether CIT training improves officer understanding of and support for using de-escalation tactics to respond to an individual in crisis. These studies are largely descriptive, relying on officer self-reports. These studies generally find that training improves officer perceptions of their ability to de-escalate a situation.
Increasing Connections to Services	Most studies examining whether CIT increases connections to services have found that CIT officers are more likely to refer individuals experiencing a behavioral health-related crisis to services than non-CIT officers. However, officer ability to divert individuals to services depends on partnerships between the police and service providers in the community. Officers are more able to refer individuals to services that are available 24/7, have open door policies, and have expedited intake processes for individuals referred by the police. Research in this area includes both quantitative studies examining referrals and qualitative studies examining officer knowledge and perceptions.
Enhancing Crisis De-escalation	A relatively limited amount of research has examined the impact of CIT on officer use of force and citizen and officer injuries. Research examining the impact of CIT on use of force has been mixed, with some studies finding that CIT reduces use of force and others finding no effects. This research largely uses officer self-reported behaviors and officer responses to vignette studies. Less research has examined the impact of CIT on injuries, again identifying mixed effects. Some studies find that CIT reduces injuries, though others find no effects. Additional research examining the impact of CIT on these outcomes using administrative reports and more rigorous methodologies are needed.
Reducing Pressure on the Criminal Justice System	The impact of CIT on arrests has been relatively mixed across studies, with some studies suggesting that CIT reduces the use of arrest and others suggesting that CIT does not impact arrests. Some studies suggest that reductions in arrest depend on officer access to alternative options. Studies have also indicated that CIT can reduce the use of jails and courts to process individuals experiencing behavioral health crises. A few studies have found that CIT reduces the amount of time officers spend responding to behavioral health-related crises.
Promoting Cost-Effectiveness	Only a handful of studies have examined the cost-effectiveness of CIT programs. These studies largely find that CIT is an expensive program to implement, but can achieve cost savings through reduced use of jail space.

B. Research Implications

In addition to the practical implications outlined above, this review brings several implications for research to light. One of the greatest challenges for research evaluating the impact of CIT is identifying incidents that involve behavioral health crises to examine the characteristics and outcomes related to those events (McClure et al., 2017). Identifying crisis incidents is crucial for comparing the outcomes of incidents involving CIT officers and non-CIT officers (Rogers et al., 2019). However, many agencies do not collect specific information about mental health-related incidents or police transportation to mental health services (Watson et al., 2010). Further, in agencies that do collect this information, studies often find that calls for service data may be misspecified and/or the information provided in incident reports and CIT-specific forms are incomplete, providing limited insight on the frequency, nature, and disposition of crisis incidents (Blevins et al., 2014; Kubiak et al., 2017).

The lack of data examining whether specific police-citizen interactions involve a behavioral health crisis has resulted in the use of several different data sources across CIT studies, including administrative data created to capture the characteristics of crisis events (e.g., calls for service, incident reports, CIT-specific reports) and/or officer self-report data detailing their experiences responding to these incidents (both scenario-based and real world). Some researchers suggest that using officers' self-report data to identify the frequency, characteristics, and experience of crisis incidents can be as accurate, if not more accurate, than the use of official data in the study of outcomes related to behavioral health crises (Watson et al., 2010). However, limitations of self-report data, including social desirability bias and – in the case of vignette or scenario-based evaluations – perceptual differences in real world and artificial events, supports the continued use of agency records in the evaluation of CIT effects on officer activities (Compton et al., 2011). As it stands, the variability in the types of data used to identify crisis incidents and examine the impact of CIT on these incidents likely contributes to the mixed findings across outcomes in this body of research.

Our understanding of the impact of CIT is further limited by the descriptive nature of the available research. In particular, few studies provide rigorous comparisons of outcomes across CIT and non-CIT officers. Those researchers that attempt to provide comparable comparison groups often face difficulties because officers who volunteer to participate in CIT are inherently different from their non-CIT counterparts (Watson et al., 2011). Indeed, proponents of CIT argue that using volunteer officers is integral to the CIT model and is justified by the need to identify officers with appropriate backgrounds and dispositions for resolving behavioral health crises (Morabito et al., 2012; Watson, 2010; Watson & Fulambarker, 2012). Nevertheless, from a research perspective, it can be difficult to distinguish whether observed effects are a product of the CIT training or of the differences that naturally exist across the groups of officers. Furthermore, the reliance on volunteer officers for participation in CIT training limits the opportunity to use more rigorous research methodologies, such as randomized control trials that would require the random assignment of officers to training.

The challenges associated with conducting randomized control trials extend beyond the use of volunteer officers for CIT training. Specifically, some researchers recognize the impossibility of randomly assigning calls for service to CIT and non-CIT officers to determine empirical differences in the nature and outcomes of officers' response (Watson et al., 2011). Although these challenges inhibit the development of a strong experimental body of research evaluating CIT programs, future research may build upon the existing evidence through the use of multivariate models and/or propensity score methodologies to account for differences between CIT and non-CIT officers and the incidents they respond to more fully isolate the impact of CIT.

Given the methodological constraints described above, most CIT studies rely on officer surveys to evaluate changes in officers' attitudes from pre- to post-CIT training. Many of these studies have been rigorous quasi-experiments and have been published in peer-reviewed journals, with the results suggesting that CIT can successfully improve officer knowledge about behavioral health and perceptions of individuals experiencing a crisis (Watson et al., 2017). Less research, however, has examined whether these changes in knowledge and attitudes persist over time. Further, given that the goal of CIT is to improve officer behaviors in their interactions with individuals experiencing a behavioral health crisis, future research should examine whether increased officer knowledge about behavioral health and de-escalation translates to improved resolution of crisis events (Compton et al., 2014a; Watson et al., 2017). Currently, limited research has focused on behavioral outcomes associated with the implementation of CIT.

Finally, despite the collaborative nature of CIT strategies, the vast majority of the research focuses on police officers. Additional research examining the impact of CIT on other relevant stakeholders is needed. For instance, although dispatchers are integral to identifying crises and dispatching CIT officers to those calls, less formal training has been developed to train dispatchers and fewer studies have examined the impact of dispatchers on CIT programs (Compton et al., 2010; Watson et al., 2011). Similarly, additional research examining the relationships between police agencies, behavioral health service providers, and impacted individuals are needed. Through conducting process evaluations, future researchers can more soundly identify effective CIT strategies.

Finally, the vast majority of the CIT research has focused on police interactions with individuals experiencing a mental health- or substance use-related crisis. Given that the tactics and priorities promoted in the CIT model could also improve police interactions with individuals experiencing intellectual and/or developmental disabilities, additional research examining the influence of CIT on police relationships with members of this population are needed.

C. Conclusion

CIT is a comprehensive police-led strategy designed to improve police interactions with individuals experiencing behavioral health crises and to divert those individuals from the criminal justice system into appropriate treatment and services. The success of these programs depends on strong collaborations between the police, the behavioral health community,

advocacy groups, and the community. Extant research suggests that training officers in CIT improves their knowledge surrounding behavioral health conditions, although research has yet to conclusively support the use of these programs to reduce the use of arrest, use of force, and to prevent injuries during police encounters with individuals in crisis. As such, some researchers have considered CIT to be an evidence-based practice for improving officer attitudes, but call for additional research to determine whether CIT is also an evidence-based practice for changing officer behavior (Watson et al., 2017). The barriers to conducting the needed research include data collection challenges and the infeasibility of randomization in many locations. Nevertheless, the use of rigorous quasi-experiments could bolster the evidence-base in the CIT literature. Given a wide range of anecdotal and descriptive studies of these programs, the CIT model appears to be a promising strategy for police agencies seeking to improve their responses to behavioral health-related crises. Additional research examining the impact of these programs on police interactions with individuals with intellectual and/or developmental disabilities is sorely needed.

VII. References

American Association on Intellectual and Developmental Disabilities. (n.d.). *Definition of intellectual disability.* Retrieved July 6, 2021 from https://www.aaidd.org/intellectual-disability/definition

American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders,* (DSM-5®). American Psychiatric Publishing.

Bahora, M., Hanafi, S., Chien, V. H., & Compton, M. T. (2008). Preliminary evidence of effects of crisis intervention team training on self-efficacy and social distance. *Administration and Policy in Mental Health and Mental Health Services Research*, *35*(3), 159-167.

Blevins, K. R., Lord, V., & Bjerregaard, B. (2014). Evaluating crisis intervention teams: Possible impediments and recommendations. *Policing: An International Journal of Police Strategies & Management*, *37*(3), 484-500.

Bonfine, N., Ritter, C., & Munetz, M. R. (2014). Police officer perceptions of the impact of crisis intervention team (CIT) programs. *International Journal of Law and Psychiatry*, *37*(4), 341-350.

Borum, R., Deane, M. W., Steadman, H. J., & Morrissey, J. (1998). Police perspectives on responding to mentally ill people in crisis: Perceptions of program effectiveness. *Behavioral Sciences and the Law*, *16*(4), 393-405.

Bower, D. L., & Pettit, G. (2001). The Albuquerque Police Department's crisis intervention team: A report card. *FBI Law Enforcement Bulletin, 70*(2), 1-6.

Broner, N., Lattimore, P. K., Cowell, A. J., & Schlenger, W. E. (2004). Effects of diversion on adults with co-occurring mental illness and substance use: Outcomes from a national multi-site study. *Behavioral Sciences and the Law*, *22*(4), 519-541.

Canada, K. E., Angell, B., & Watson, A. C. (2012). Intervening at the entry point: Differences in how CIT trained and non-CIT trained officers describe responding to mental health-related calls. *Community Mental Health Journal*, *48*(6), 746-755.

Canada, K. E., Watson, A. C., & O'Kelley, S. (2021). Utilizing crisis intervention teams in prison to improve officer knowledge, stigmatizing attitudes, and perception of response options. *Criminal Justice and Behavior*, *48*(1), 10-31.

Centers for Disease Control and Prevention. (n.d.). Original essential public health services framework, the public health system. Retrieved July 7, 2021 from https://www.cdc.gov/publichealthgateway/publichealthservices/originalessentialhealthservices.html

CIT International. (2020). https://www.citinternational.org/

Committee on Psychiatry and the Community for the Group for the Advancement of Psychiatry. (2021, March). *Roadmap to the ideal crisis system: Essential elements, measurable standards and best practices for behavioral health crisis response.* National Council for Behavioral Health.

Compton, M. T., Bahora, M., Watson, A. C., & Oliva, J. R. (2008). A comprehensive review of extant research on crisis intervention team (CIT) programs. *Journal of the American Academy of Psychiatry and the Law*, *36*(1), 47-55.

Compton, M. T., Bakeman, R., Broussard, B., D'Orio, B., & Watson, A. C. (2017). Police officers' volunteering for (rather than being assigned to) crisis intervention team (CIT) training: Evidence for a beneficial self-selection effect. *Behavioral Sciences and the Law*, *35*(5-6), 470-479.

Compton, M. T., Bakeman, R., Broussard, B., Hankerson-Dyson, D., Husbands, L., Krishan, S., Stewart-Hutto, T., D'Orio, B. M., Oliva, J. R., Thompson, N. J., & Watson, A. C. (2014a). The police-based crisis intervention team (CIT) model: I. Effects on officers' knowledge, attitudes, and skills. *Psychiatric Services*, *65*(4), 517-522.

Compton, M. T., Bakeman, R., Broussard, B., Hankerson-Dyson, D., Husbands, L., Krishan, S., Stewart-Hutto, T., D'Orio, B. M., Oliva, J. R., Thompson, N. J., & Watson, A. C. (2014b). The police-based crisis intervention team (CIT) model: II. Effects on level of force and resolution, referral and arrest. *Psychiatric Services*, *65*(4), 523-529.

Compton, M. T., Broussard, B., Hankerson-Dyson, D., Krishan, S., Stewart, T., Oliva, J. R., & Watson, A. C. (2010). System- and policy-level challenges to full implementation of the crisis intervention team (CIT) model. *Journal of Police Crisis Negotiations*, *10*(1), 72-85.

Compton, M. T., & Chien, V. H. (2008). Factors related to knowledge retention after crisis intervention team training for police officers. *Psychiatric Services*, *59*(9), 1049-1051.

Compton, M. T., Demir Neubert, B. N., Broussard, B., McGriff, J. A., Morgan, R., & Oliva, J. R. (2011). Use of force preferences and perceived effectiveness of actions among crisis intervention team (CIT) police officers and non-CIT officers in an escalating psychiatric crisis involving a subject with schizophrenia. *Schizophrenia Bulletin*, *37*(4), 737-745.

Compton, M. T., Esterberg, M. L., McGee, R., Kotwicki, R. J., & Oliva, J. R. (2006). Crisis intervention team training: Changes in knowledge, attitudes, and stigma related to schizophrenia. *Psychiatric Services*, *57*(8), 1199-1202.

Compton, M. T., Halpern, B., Broussard, B., Anderson, S., Smith, K., Ellis, S., Griffin, K., Pauselli, L., & Myers, N. (2017). A potential new form of jail diversion and reconnection to mental health services: I. Stakeholders' views on acceptability. *Behavioral Sciences and the Law*, *35*(5-6), 480-491.

Cowell, A. J., Broner, N., & Dupont, R. (2004). The cost-effectiveness of criminal justice diversion

programs for people with serious mental illness co-occurring with substance abuse: Four case studies. *Journal of Contemporary Criminal Justice*, *20*(3), 292-314.

Cuddeback, G. S., Kurtz, R. A., Blank Wilson, A., Vandeinse, T., & Burgin, S. E. (2016). Segmented versus traditional crisis intervention team training. *Journal of the American Academy of Psychiatry and the Law*, *44*(3), 338-343.

Davidson, M. L. (2016). A criminal justice system–wide response to mental illness: Evaluating the effectiveness of the Memphis crisis intervention team training curriculum among law enforcement and correctional officers. *Criminal Justice Policy Review*, *27*(1), 46-75.

Demir, B., Broussard, B., Goulding, S. M., & Compton, M. T. (2009). Beliefs about causes of schizophrenia among police officers before and after crisis intervention team training. *Community Mental Health Journal*, *45*(5), 385-392.

Developmental Disabilities Assistance and Bill of Rights Act of 2000. Pub. L. 106-402,114 Stat. 1683 § 102. https://acl.gov/sites/default/files/about-acl/2016-12/dd_act_2000.pdf

Dupont, R., Cochran, S., & Pillsbury, S. (2007, September). *Crisis intervention team: Core elements*. Retrieved from http://cit.memphis.edu/pdf/CoreElements.pdf

El-Mallakh, P. L., Kiran, K., & El-Mallakh, R. S. (2014). Costs and savings associated with implementation of a police crisis intervention team. *Southern Medical Journal*, *107*(6), 391-395.

El-Mallakh, R. S., Spratt, D., Butler, C., & Strauss, G. (2008). Evaluation of consequences of implementation of police crisis intervention team in Louisville. *The Journal of the Kentucky Medical Association*, *106*(9), 435-437.

Ellis, H. A. (2014). Effects of a crisis intervention team (CIT) training program upon police officers before and after crisis intervention team training. *Archives of Psychiatric Nursing*, *28*(1), 10-16.

Engel, R. S., McManus, H. D., & Herold, T. D. (2020). Does de-escalation training work?: A systematic review and call for evidence in police use-of-force reform. *Criminology and Public Policy*, *19*(3), 721-759.

Hanafi, S., Bahora, M., Demir, B. N., & Compton, M. T. (2008). Incorporating crisis intervention team (CIT) knowledge and skills into the daily work of police officers: A focus group study. *Community Mental Health Journal*, *44*(6), 427-432.

Herrington, V., & Pope, R. (2014). The impact of police training in mental health: An example from Australia. *Policing and Society*, *24*(5), 501-522.

Kane, E., Evans, E., & Shokraneh, F. (2018). Effectiveness of current policing-related mental health investigations: A systematic review. *Criminal Behaviour and Mental Health*, *28*(2),

108-119.

Kerr, A. N., Morabito, M., & Watson, A. C. (2010). Police encounters, mental illness, and injury: An exploratory investigation. *Journal of Police Crisis Negotiations*, *10*(1), 116-132.

Kubiak, S., Comartin, E., Milanovic, E., Bybee, D., Tillander, E., Rabaut, C., Bisson, H., Dunn, L. M., Bouchard, M. J., Hill, T., & Schneider, S. (2017). Countywide implementation of crisis intervention teams: Multiple methods, measures and sustained outcomes. *Behavioral Sciences and the Law*, *35*(5-6), 456-469.

Lattimore, P. K., Broner, N., Sherman, R., Frisman, L., & Shafer, M. S. (2003). A comparison of prebooking and postbooking diversion programs for mentally ill substance-using individuals with justice involvement. *Journal of Contemporary Criminal Justice*, *19*(1), 30-64.

Marotta, P., Barnum, J., Atson, A., & Caplan, J. (2014). Crisis Intervention team training programs for law enforcement officers: A Systematic Review. In *Campbell Systematic Reviews*. http://www.campbellcollaboration.org/lib/project/330/

McClure, D., Paddock, E., Hawkins, R., & Mitra-Majumdar, M. (2017). *Pay for success and the crisis intervention team model: Insights from the PFS-CIT learning community*. Urban Institute.

Morabito, M. S., Kerr, A. N., Watson, A., Draine, J., Ottati, V., & Angell, B. (2012). Crisis intervention teams and people with mental illness: Exploring the factors that influence the use of force. *Crime and Delinquency*, *58*(1), 57-77.

Munetz, M. R., Morrison, A., Krake, J., Young, B., & Woody, M. (2006). Statewide implementation of the crisis intervention team program: The Ohio model. *Psychiatric Services*, *57*(11), 1569-1571.

National Alliance on Mental Illness. (n.d.). *Mental health conditions.* Retrieved July 7, 2021 from https://www.nami.org/About-Mental-Illness/Mental-Health-Conditions

National Institute on Drug Abuse. (2018, July). *Media guide: How to find what you need to know about drug use and addiction.* U.S. Department of Health and Human Services, National Institutes of Health.

Parent, R. (2007). Crisis intervention: The police response to vulnerable individuals. *The Police Journal: Theory, Practice and Principles*, *80*(2), 109-116.

Regulations to Implement the Equal Employment Provisions of the Americans with Disabilities Act, 29 CFR §1630.2 (2016). https://www.govinfo.gov/content/pkg/CFR-2016-title29-vol4/xml/CFR-2016- title29-vol4-part1630.xml

Reuland, M. (2010). Tailoring the police response to people with mental illness to community

characteristics in the USA. *Police Practice and Research*, *11*(4), 315-329.

Reuland, M., & Cheney, J. (2005). *Enhancing success of police-based diversion programs for people with mental illness*. GAINS Technical Assistance and Policy Analysis Center for Jail Diversion.

Ritter, C., Teller, J. L. S., Munetz, M. R., & Bonfine, N. (2010). Crisis Intervention Team (CIT) training: Selection effects and long-term changes in perceptions of mental illness and community preparedness. *Journal of Police Crisis Negotiations*, *10*(1), 133-152.

Rogers, M. S., McNiel, D. E., & Binder, R. L. (2019). Effectiveness of police crisis intervention training programs. *Journal of the American Academy of Psychiatry and the Law*, *47*(4), 414-421.

Steadman, H. J., Deane, M. W., Borum, R., & Morrissey, J. P. (2000). Comparing outcomes of major models of police responses to mental health emergencies. *Psychiatric Services*, *51*(5), 645-649.

Strauss, G., Glenn, M., Reddi, P., Afaq, I., Podolskaya, A., Rybakova, T., Saeed, O., Shah, V., Singh, B., Skinner, A., & El-Mallakh, R. S. (2005). Psychiatric disposition of patients brought in by crisis intervention team police officers. *Community Mental Health Journal*, *41*(2), 223-228.

Taheri, S. A. (2016). Do crisis intervention teams reduce arrests and improve officer safety? A systematic review and meta-analysis. *Criminal Justice Policy Review*, *27*(1), 76-96.

Teller, J. L. S., Munetz, M. R., Gil, K. M., & Ritter, C. (2006). Crisis intervention team training for police officers responding to mental disturbance calls. *Psychiatric Services*, *57*(2), 232-237.

Thompson, L., & Borum, R. (2006). Crisis intervention teams (CIT): Considerations for knowledge transfer. *Mental Health Law & Policy Faculty Publications*, Paper 548. https://digitalcommons.usf.edu/mhlp_facpub/548/?utm_source=scholarcommons.usf.edu%2Fmhlp_facpub%2F548&utm_medium=PDF&utm_campaign=PDFCoverPages

Usher, L., Watson A. C., Bruno, R., Andriukaitis, S., Kamin, D., Speed, C. & Taylor, S. (2019). *Crisis intervention team (CIT) programs: A best practice guide for transforming community responses to mental health crises*. CIT International.

Vickers, B. (2000, July). Memphis, Tennessee, police department's crisis intervention team. *Bulletin from the Field: Practitioner Perspectives*. U.S. Department of Justice, Office of Justice Programs, Bureau of Justice Assistance.

Watson, A. C. (2010). Research in the real world: Studying Chicago police department's crisis intervention team program. *Research on Social Work Practice*, *20*(5), 536-543.

Watson, A. C., Compton, M. T., & Draine, J. N. (2017). The crisis intervention team (CIT) model:

An evidence-based policing practice? *Behavioral Sciences and the Law*, *35*(5-6), 431-441.

Watson, A. C., Compton, M. T., & Pope, L. G. (2019). *Crisis response services for people with mental illnesses or intellectual and developmental disabilities: A review of the literature on police-based and other first response models*. Vera Institute of Justice.

Watson, A. C., & Fulambarker, A. J. (2012). The crisis intervention team model of police response to mental health crises: A primer for mental health practitioners. *Best Practices in Mental Health*, *8*(2), 71-81.

Watson, A. C., Ottati, V. C., Draine, J., & Morabito, M. (2011). CIT in context: The impact of mental health resource availability and district saturation on call dispositions. *International Journal of Law and Psychiatry*, *34*(4), 287-294.

Watson, A. C., Ottati, V. C., Morabito, M., Draine, J., Kerr, A. N., & Angell, B. (2010). Outcomes of police contacts with persons with mental illness: The impact of CIT. *Administration and Policy in Mental Health and Mental Health Services Research*, *37*(4), 302-317.

Wells, W., & Schafer, J. A. (2006). Officer perceptions of police responses to persons with a mental illness. *Policing: An International Journal of Police Strategies & Management*, *29*(4), 578-601.

APPENDIX A. Evaluations of Crisis Intervention Team Programs

Author(s) / Year	Publication Type	Crisis Intervention Team Program	Location	Methodology	Outcomes of Interest
Bahora et al. (2008)	Peer-Reviewed Article	CIT	United States	Quasi-Experimental: Pre/Post Survey	• Officer Attitudes
Blevins et al. (2014)	Peer-Reviewed Article	CIT	United States	Mixed Methods: Quantitative: Surveys; Qualitative: Focus groups	• Stakeholder Perceptions • Completion of CIT Forms
Bonfine et al. (2014)	Peer-Reviewed Article	CIT	United States	Quantitative: Survey	• Officer Attitudes
Borum et al. (1998)	Peer-Reviewed Article	CIT, Mobile Mental Health Crisis Teams, and In-house Social Workers	United States	Quantitative: Survey	• Officer Attitudes
Bower & Pettit (2001)	Report/Review	CIT	United States	Descriptive Analyses	• Referral to Services • Citizen Injuries • Use of Force • Arrest • Cost-Effectiveness
Broner et al. (2004)	Peer-Reviewed Article	CIT	United States	Mixed Methods: Quantitative: Quasi-Experimental CIT/Traditional Criminal Justice Processing Qualitative: Interviews	• Referrals to Services • Recidivism • Adherence to Prescribed Treatment/Medication
Canada et al. (2012)	Peer-Reviewed Article	Chicago CIT	United States	Qualitative: Officer Interviews	• Arrest • Referral to Services
Canada et al. (2020)	Peer-Reviewed Article	CIT	United States	Mixed methods: Quantitative: Quasi-Experimental Pre/Post Surveys Qualitative: Interviews	• Officer Attitudes • Use of Force
Compton & Chein (2008)	Peer-Reviewed Article	CIT	United States	Quantitative: Survey	• Officer Attitudes

Author(s) / Year	Publication Type	Crisis Intervention Team Program	Location	Methodology	Outcomes of Interest
Compton et al. (2006)	Peer-Reviewed Article	CIT	United States	Quasi-Experimental: Pre/Post Survey	• Officer Attitudes
Compton et al. (2008)	Peer-Reviewed Article	CIT	Various	Descriptive	• Officer Attitudes • Arrest • Referrals to Services • Program Implementation
Compton et al. (2010)	Peer-Reviewed Article	CIT	Various	Descriptive	• Program Components
Compton et al. (2011)	Peer-Reviewed Article	CIT	United States	Quasi-Experimental: CIT Trained/Non-Trained Comparisons	• Responses to Vignettes
Compton et al. (2014a)	Peer-Reviewed Article	CIT	United States	Quasi-Experimental: CIT/Non-CIT Surveys	• Officer Attitudes • Responses to Vignettes
Compton et al. (2014b)	Peer-Reviewed Article	CIT	United States	Quasi-Experimental: CIT/Non-CIT Self-Reported Encounters	• Arrest • Use of Force
Compton et al. (2017a)	Peer-Reviewed Article	CIT	United States	Quantitative: CIT Volunteers to CIT Mandated Surveys	• Officer Attitudes
Compton et al. (2017b)	Peer-Reviewed Article	CIT	United States	Qualitative: Focus groups of Patients and Officers	• Officer Attitudes • Service Provider Attitudes • Consumer Attitudes
Cowell et al. (2004)	Peer-Reviewed article	Various Pre- and Post-Booking Diversion Programs	Various	Cost-Effectiveness Evaluation	• Costs and Savings
Cuddeback et al. (2016)	Peer-Reviewed article	CIT	United States	Quasi-Experimental: Pre/Post Survey	• Officer Attitudes
Davidson (2016)	Peer-Reviewed article	Memphis CIT	United States	Quasi-Experimental: Pre/Post Survey	• Officer Attitudes; Retention of Attitudes
Demir et al. (2009)	Peer-Reviewed article	CIT	United States	Quasi-Experimental: Pre/Post Survey	• Officer Attitudes

Author(s) / Year	Publication Type	Crisis Intervention Team Program	Location	Methodology	Outcomes of Interest
Dupont et al. (2007)	Report	Memphis CIT	United States	Descriptive	• Program Implementation
Ellis (2014)	Peer-Reviewed Article	CIT	United States	Quasi-Experimental: Pre/Post Survey	• Officer Attitudes
El-Mallakh et al. (2014)	Peer-Reviewed Article	Memphis CIT	United States	Cost-Effectiveness Evaluation	• Costs and Savings
El-Mallakh et al. (2008)	Peer-Reviewed Article	CIT	United States	Quasi-Experimental	• Referrals to Services • Arrests
Hanafi et al. (2008)	Peer-Reviewed Article	CIT	United States	Qualitative: Officer Focus Groups	• Officer Attitudes
Herrington & Pope (2014)	Peer-Reviewed Article	Mental Health Intervention Teams (MHIT)	Australia	Mixed Methods: Quantitative: Quasi-Experimental Comparison of CIT/Non-CIT Reports Qualitative: Interviews; Focus Groups with Impacted Individuals	• Officer Attitudes • Referrals to Services • Use of Force • Officer Time Spent on Scene
Kerr et al. (2010)	Peer-Reviewed Article	CIT	United States	Qualitative: Officer Interviews	• Officer Injuries • Citizen Injuries • Use of Force
Kubiak et al. (2017)	Peer-Reviewed Article	CIT	United States	Mixed Methods: Quantitative: Surveys; Administrative Reports; Drop-off Center Logs; Qualitative: Focus Groups	• Officer Attitudes • Referrals to Services
Lattimore et al. (2003)	Peer-Reviewed Article	Various Pre- and Post-booking Diversion Programs	Various	Descriptive: Interviews	• Mental Health Indicators • Substance Use • Recidivism
Marotta et al. (2014)	Report	CIT	Various	Systematic Review	• Officer Attitudes • Referrals to Services • Officer Time Spent • Re-arrest • Treatment Outcomes

Author(s) / Year	Publication Type	Crisis Intervention Team Program	Location	Methodology	Outcomes of Interest
McClure et al. (2017)	Report	CIT and Pay-for-Success	Various	Qualitative: Focus Groups Literature Review	• Program Components
Morabito et al. (2012)	Peer-Reviewed Article	Chicago CIT	United States	Qualitative: Officer Interviews	• Use of Force
Munetz et al. (2006)	Peer-Reviewed Article	CIT Ohio Model	United States	Descriptive	• Program Implementation
Parent (2007)	Peer-Reviewed Article	Review of Literature on CIT	Various	Literature Review	• Suicide-by-Cop
Reuland (2010)	Peer-Reviewed Article	CIT	Various	Qualitative: Interviews and Site Visits	• Program Implementation • Program Components
Reuland & Cheney (2005)	Report	CIT and Other Diversion Programs	Various	Mixed Method: Quantitative: Survey Qualitative: Interviews	• Program Implementation
Ritter et al. (2010)	Peer-Reviewed Article	CIT	United States	Quasi-Experimental: Pre/Post Survey; CIT/Non-CIT Officer Comparisons	• Officer Attitudes
Rogers et al. (2019)	Peer-Reviewed Article	Review of Literature on CIT	Various	Literature Review	• Officer Injuries • Citizen Injuries • Arrest • Use of Force
Steadman et al. (2000)	Peer-Reviewed Article	CIT	Various	Descriptive: Quantitative Comparison	• Arrest • Treatment Provision • On-Scene Resolutions • Referrals to Services
Strauss et al. (2005)	Peer-Reviewed Article	CIT	United States	Descriptive: Examination of Patient Records	• Officer Ability to Identify Individuals with Mental Illness

Author(s) / Year	Publication Type	Crisis Intervention Team Program	Location	Methodology	Outcomes of Interest
Taheri (2016)	Peer-Reviewed Article	Meta-Analysis CIT	United States	Quantitative: Standardized Mean Effect Size (d)	• Arrests • Use of Force • Officer Injuries
Teller et al. (2006)	Peer-Reviewed Article	CIT	United States	Quasi-Experimental: CIT/Non-CIT Officer Dispatch Logs	• Referrals to Services • Arrests
Thompson & Borum (2006)	Report	CIT	United States	Program Review	• Program Implementation
Vickers (2000)	Report	CIT	United States	Program Review	• Arrest • Referrals to Services • Officer Injuries • Citizen injuries • Use of Force • Use of CIT Skills
Watson (2010)	Peer-Reviewed Article	CIT	United States	Mixed Methods: Quantitative: Quasi-Experiment using a Matched Control Qualitative: Interviews	• Arrest • Referrals to Services • Officer Injuries • Citizen Injuries • Use of Force • Use of CIT Skills
Watson et al. (2010)	Peer-Reviewed Article	CIT	United States	Quantitative: Outcomes of Calls-for-Service Based on Interviews	• Referrals to Services • Arrests • Contact Only
Watson et al. (2011)	Peer-Reviewed Article	CIT	United States	Qualitative: Interviews	• Referrals to Services
Watson et al. (2017)	Peer-Reviewed Article	CIT	United States	Literature Review	• CIT Components

Author(s) / Year	Publication Type	Crisis Intervention Team Program	Location	Methodology	Outcomes of Interest
Watson et al. (2019)	Report	Review of CIT Research	Various	Literature Review	• Stakeholder Perceptions • Arrest • Injuries • Use of Force • Referral to Services • Recidivism • Mental Health Outcomes • Cost-Effectiveness • Program Implementation
Wells & Schafer (2006)	Peer-Reviewed Article	CIT	United States	Quantitative: Survey	• Officer Attitudes