

# A Comprehensive Review of Extant Research on Crisis Intervention Team (CIT) Programs

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## ► Abstract

The Memphis model of the Crisis Intervention Team (CIT) program has established itself as a prototype of law enforcement-mental health collaboration for a large number of municipalities across the country, and several states are implementing statewide training programs that seek to train approximately 20 percent of their police forces. Given the enthusiasm of advocates, law enforcement/public safety personnel, and mental health professionals for the CIT program, and in light of the increasing pace of implementation of this complex collaboration in a multitude of localities across the country, we seek in this review to provide a systematic summary of the very limited available research that has been conducted on CIT to date and to comment on future avenues for research.

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The Crisis Intervention Team (CIT) model is a specialized police-based program intended to enhance officers' interactions with individuals with mental illnesses and improve the safety of all parties involved in mental health crises. In part as a result of a police shooting incident involving a person with a mental illness, Dr. Randolph Dupont and Major Sam Cochran of the University of Tennessee, Memphis, and the Memphis Police Department, respectively, developed CIT in 1988 as a local effort to bring together law enforcement personnel, mental health professionals, and advocates.<sup>1</sup> Having since established itself as a model for other localities, the program provides self-selected officers (or, more commonly, volunteers selected after a review by a CIT coordinator or other senior officer) with 40 hours of classroom and experiential de-escalation training in handling crises. These trained officers then serve as specialized front-line responders who are better informed to redirect individuals with mental illnesses, when appropriate, to treatment services instead of the judicial system. Broader goals of collaborations formed by CIT relate to addressing system change within the local mental health service system and the law enforcement/criminal justice arena so that crisis care for individuals with serious mental illnesses is more accessible in the community.<sup>1</sup>

CIT is one of several models of collaboration between law enforcement and mental health. Specifically, CIT is a police-based specialized police response. Other strategies are police-based mental health responses, in which the police department hires mental health consultants to assist with mental health crisis calls, and mental health-based specialized responses, which are typified by mobile crisis units.

Deane and coworkers<sup>2</sup> surveyed 174 urban police departments in 42 states to determine the prevalence of departments that had policies for interacting with individuals with mental illnesses, as well as departments' perceptions regarding their overall effectiveness in responding to a mental health consumer in crisis. Of the 78 (45%) departments that had specialized responses to deal with individuals with mental illnesses, only 6 (3%) used the police-based specialized response (typified by CIT). Today, however, CIT is considered by many to be the most rapidly expanding and promising partnership between law enforcement and mental health professionals, and the Bureau of Justice Assistance estimates that there are more than 400 CIT programs operating in the United States.<sup>3</sup>

The CIT model, which has been described in several reports and reviews,<sup>1,4-7</sup> is being implemented in cities and counties across the United States, and in statewide efforts in Connecticut, Georgia, Iowa, New Mexico, North Carolina, Ohio, Oregon, Tennessee, Texas, and Washington.<sup>8,9</sup> The collaboration in Ohio among the Akron Police Department, the Summit County Alcohol, Drug, Addiction and Mental Health Services Board, and the National Alliance on Mental Illness (NAMI), as well as various other organizations, has resulted in CIT training for 1,831 officers in 47 of Ohio's 88 counties.<sup>5</sup> In Georgia, a collaboration among the Georgia Bureau of Investigation, the Georgia Division of Mental Health, Developmental Disabilities and Addictive Diseases, and NAMI, along with numerous other organizations, has expanded its initial focus on metropolitan Atlanta to include the entire state, with a goal of training 20 percent of Georgia's law enforcement officers by 2008.<sup>6,7</sup> To date, Georgia has trained approximately 1,440 officers in approximately 75 different law enforcement agencies in many of Georgia's 159 counties.

Given the enthusiasm of advocates, law enforcement/public safety personnel, and mental health professionals for the CIT program and in light of the increasing pace of implementation of this complex collaboration in a multitude of localities across the country, we seek in this review to provide a systematic summary and critical analysis of the limited available research that has been conducted on CIT to date and to comment on future avenues for research.

## ► **Methods**

For the purposes of this review, "research on CIT" was defined as evaluations, surveys, or outcome studies conducted to examine specific research questions or test hypotheses related to the CIT model. Thus, reports of simple descriptive statistics were generally excluded. Because eligible studies varied prominently in methodology—in addition to the paucity of studies that was uncovered—a narrative synthesis was deemed more appropriate than a formal quantitative meta-analysis. This approach, though beneficial in providing an overview of an understudied service model, does not allow for formal comparisons of numerical data across studies and does not allow for quantitative summaries of diverse findings.

The initial search was conducted using the MEDLINE and PsycINFO databases, from 1988 (the year of the inception of CIT in Memphis) through December 2006, restricted to the English language. In addition, searches were conducted with databases of criminal justice, criminology, and sociology

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abstracts. Search terms included "crisis intervention team," as well as "police or law enforcement" combined with "crisis intervention" to identify original research, program reports, and review articles relevant to the topic of CIT. The full text of all pertinent citations was carefully reviewed, and bibliographies were scanned to locate other relevant publications. In addition to the database searches, four other search strategies were employed to allow for a thorough and comprehensive review and to take into account the fact that CIT research is in its infancy, and some early research findings may not have been published in peer-reviewed journals. First, all abstracts contained within the conference programs of the First National CIT Conference (which took place in May 2005, in Columbus, OH) and the Second National CIT Conference (September 2006, Orlando, FL) were reviewed for formal research findings. Second, an Internet search was conducted to locate potential research reports that had not been published previously in the academic literature or that had not been presented in the conference programs. Third, the NAMI website ([www.nami.org](http://www.nami.org)), which has been a repository for numerous reports on CIT programs, was searched using the search term "CIT." Finally, all four authors, who are very familiar with the literature on CIT, reviewed the reference lists for possible omissions of published findings and to identify results that have been submitted for publication. Research that has not been published in peer-reviewed journals is indicated in the text as "unpublished data."

## ► Results

The literature database searches revealed 20 articles that were reviewed for research findings, and the conference guides, Internet search, and NAMI Website search revealed 5,377, and 143 potentially relevant citations, respectively. Of note, searches of criminal justice, criminology, and sociology revealed only one additional reference,<sup>10</sup> indicating that CIT-related research is only beginning to be presented outside of the mental health literature. Review of all these citations uncovered 12 reports describing empirical research on CIT. For ease of summarization and interpretation, studies generally could be divided into three categories: those reporting on officer-level outcomes of the CIT program (Hanafi S, Bahora M, Demir B, *et al*: Incorporating Crisis Intervention Team (CIT) knowledge and skills into the daily work of police officers: a focus group study. *Community Ment Health J*, submitted)<sup>10-14</sup>; those involving dispositions of calls eliciting a CIT response<sup>9,15,16</sup>; and analyses that have used the Memphis model of CIT as an exemplar of prebooking jail diversion.<sup>17-19</sup> Several other studies and reports are informative, though not directly focused on research questions related to CIT.

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### ***Officer-Level Outcomes: Enhanced Preparedness, Confidence/Self-Efficacy and Knowledge, and Reduced Social Distance***

Six reports on officer-level outcomes of the CIT program were identified, including four surveys of police officers that included CIT-trained officers,<sup>10-14</sup> and one focus group study with CIT officers (Hanafi S, Bahora M, Demir B, *et al*: Incorporating Crisis Intervention Team (CIT) knowledge and skills into the daily work of police officers: a focus group study. *Community Ment Health J*, submitted).

To assess officers' perceptions about handling incidents involving individuals with mental illnesses,

Borum and colleagues<sup>11</sup> sampled 452 patrol officers from programs that represented three different approaches to responding to individuals with mental illnesses in crisis: a police-based specialized mental health response, using the prototype of the Birmingham Community Service Officers (CSO) program in Birmingham, Alabama; a police-based specialized police response program in Memphis, Tennessee (CIT); and a mental health-based specialized mental health response (mobile crisis team) in Knoxville, Tennessee. The survey, administered at roll call at the beginning of the shift in each of the three jurisdictions, covered several domains, including officer preparation for handling incidents involving people with mental illnesses and perceived helpfulness of the mental health system. Among the participants, 207 officers from Memphis were surveyed (171 non-CIT officers and 36 CIT officers), representing 15 percent of the Memphis Police Department at that time. Several significant findings were noteworthy. First, Memphis CIT officers were more likely to indicate that they were well prepared in situations involving people with mental illnesses (100%) compared with their non-CIT counterparts in Memphis (65.4%). Second, Memphis CIT officers were less likely to report confidence in other officers' preparedness (30.5%) compared with non-CIT Memphis officers (54.3%). Third, Memphis CIT officers were more likely to rate the mental health system as being helpful (69.4%) than were non-CIT officers (40.3%) and officers from the other two sites (37.0% in Birmingham and 14.5% in Knoxville). Similarly, Memphis CIT officers reported emergency rooms to be more helpful (68.5%) than did non-CIT officers (49.1%) and officers from the other sites (29.7% in Birmingham and 38.1% in Knoxville). Even the non-CIT officers in Memphis rated their department's program as being significantly more effective than did the other sites, with regard to meeting the needs of people with mental illnesses in crisis, keeping these individuals out of jail, minimizing the amount of time officers spend on these types of calls, and maintaining community safety.

Ritter and associates (unpublished data, 2006) surveyed officers in the Akron, Ohio, police department, including 59 officers before the CIT program was initiated in Akron, 75 officers beginning CIT training, and 41 officers having completed CIT training at least one year before the survey.<sup>12</sup> CIT-trained officers had significantly lower preferences for social distance (a form of stigma measured with the Social Distance Scale) from an individual with schizophrenia (as described in a one-paragraph vignette). Officers who had not been trained expressed a greater desire for social distance than either of the other two CIT groups. The survey also demonstrated differences in the expected direction, in terms of causal attributions regarding the patient with schizophrenia (i.e., CIT officers were less likely to endorse causes related to "his own bad character" or "the way he was raised").

In Georgia, Compton and coworkers<sup>13</sup> conducted a pretest/post-test survey involving 159 officers immediately before and after their 40-hour CIT training. They found improved attitudes about aggressiveness among individuals with schizophrenia, greater knowledge about that disorder, and decreased social distance toward people with schizophrenia, after completion of the CIT training. The authors suggested that such attitudinal and knowledge changes may have important implications, such as leading to improved rapport-building skills, de-escalation abilities, and communication between officers and patients and their family members, as well as better outcomes for patients in terms of referrals to mental health services. Using a similar pretest/post-test study design in the same setting, Bahora *et al.*<sup>14</sup> surveyed 58 Georgia CIT officers and 34 control non-CIT police officers to assess changes in self-

efficacy and social distance—regarding depression, cocaine dependence, schizophrenia, and alcohol dependence—as a result of CIT training. CIT-trained officers demonstrated an increased level of self-efficacy and reduced level of social distance in relation to interacting with individuals with these four psychiatric conditions.

Wells and Schafer<sup>10</sup> administered brief pre- and post-training surveys to assess 26 newly trained CIT officers' perceptions in Lafayette, Indiana. That community had implemented 40-hour CIT training, despite lack of improvement in the process officers followed for obtaining treatment and evaluation, which is an important aspect of the Memphis model. Nonetheless, training appeared to improve officers' ability to identify individuals with mental illnesses and respond appropriately; their knowledge of local treatments, services, and disposition procedures; and their comfort in interactions and communications with patients and their family members. In a qualitative study, Hanafi and colleagues (Hanafi S, Bahora M, Demir B, *et al*: Incorporating Crisis Intervention Team (CIT) knowledge and skills into the daily work of police officers: a focus group study. *Community Ment Health J*, submitted) conducted focus groups involving 25 CIT officers in Georgia to determine the ways in which officers incorporate their CIT training into their daily work. Findings illustrated that officers not only perceived an increase in knowledge of mental illnesses, but a sense of confidence in their learned skills. Officers expressed that the CIT curriculum helped them to identify common stereotypes and stigma associated with mental illnesses and, in turn, to reduce behavior based on these detrimental attitudes in interactions with individuals with mental illnesses.

### ***Dispositions of Calls Eliciting a CIT Response***

Three studies were found that were related to dispositions of CIT responses: one examining characteristics of patients referred to psychiatric emergency services by CIT officers,<sup>16</sup> one reporting proportions of mental disturbance calls eliciting a specialized response and the dispositions of cases handled by specialized police responses,<sup>15</sup> and another determining handling and disposition of mental disturbance calls.<sup>9</sup>

In Louisville, Kentucky, researchers sought to determine whether any differences existed between patients brought in to the emergency psychiatric service by CIT officers and those brought in by non-CIT sources.<sup>16</sup> Over the course of one month, authors examined data from 485 patients, finding that those who were brought in by CIT officers were more likely to have been recently involved in the local mental health system and twice as likely to have a diagnosis of schizophrenia. In all other regards, CIT-referred patients were not significantly different from patients referred from other sources, in substance use, likelihood of hospitalization, or acceptance of outpatient care. By demonstrating the similarities in patients referred by CIT officers and those referred by other sources, the authors suggested that these findings indicate that CIT officers are not only accurately identifying individuals in need of psychiatric care, but are probably reducing psychiatric morbidity by referring individuals with severe mental illnesses to treatment earlier than might occur otherwise.

Steadman and associates<sup>15</sup> utilized records of 100 police dispatch calls and 100 incident reports from each of the three specialized forms of police response models described earlier—police-based

specialized police response (such as CIT); police-based specialized mental health response; and mental health-based specialized mental health response—in Memphis, Birmingham, and Knoxville. (This was a companion article to the study by Borum *et al.*<sup>11</sup> on police perspectives of diversion programs.) The proportions of 100 mental disturbance calls that elicited a specialized response across the three sites were: 95, 28, and 40 percent in Memphis, Birmingham, and Knoxville, respectively. The increased rate in the Memphis CIT program appeared to be related to program structure (e.g., availability of a crisis triage center with a no-refusal policy for police referrals), as well as staffing patterns. Regarding dispositions of 100 cases handled by a specialized police response across the three sites, the Memphis program was found to transport 75 percent of their cases to a treatment location, in contrast to Birmingham's 20 and Knoxville's 42 percent transport rates to treatment facilities. Furthermore, the arrest rate among these cases receiving a specialized response was 2 percent in Memphis, compared with 13 and 5 percent in Birmingham and Knoxville, respectively. Other findings from this study revealed that in 94 percent of cases, a CIT officer was on the scene in less than 10 minutes, compared with 28 percent in Birmingham and 8 percent in Knoxville.<sup>1</sup>

In addition to their aforementioned survey of officers in the Akron Police Department, Teller *et al.*<sup>9</sup> and Ritter and coworkers<sup>12</sup> studied the effects of the department's CIT program on the handling and disposition of mental disturbance calls. The study examined more than 10,000 dispatch call records over a six-year period, two years before and four years after the implementation of the CIT program. After the CIT program had been implemented, the absolute number and proportion of calls relating to suspected mental illness and suspected suicide increased, CIT officers were more likely than non-CIT officers to transport persons with mental disturbances to psychiatric emergency services, and both CIT officers and non-CIT officers were less likely to transport people to treatment involuntarily.<sup>9</sup>

### ***The Memphis Model as an Exemplar of Prebooking Jail Diversion***

There have been several studies in which the Memphis CIT program was used as a prototype of a prebooking jail diversion program to allow for comparisons between pre- and postbooking subjects and variation among sites within the pre- and postbooking categories<sup>17</sup>; comparisons of outcomes of people with comorbid serious mental illnesses and substance use disorders with violent charges versus nonviolent charges who participate in jail diversion programs<sup>18</sup>; and cost-effectiveness analyses of pre- and postbooking jail diversion programs.<sup>19</sup> Although these studies, sponsored by a Substance Abuse and Mental Health Services Administration (SAMHSA) grant related to jail diversion,<sup>20</sup> do not necessarily present specific hypotheses related to CIT in particular, they have provided informative results regarding CIT as a model prebooking diversion program. However, it should be noted that CIT has many more facets than just prebooking diversion, which occurs when criminal charges could be filed but are not. While diversion is clearly an outcome of CIT, many CIT calls involve suicide threats and other crisis situations that do not represent criminal behavior.

Using data from 971 diverted subjects across eight sites, including the Memphis CIT prebooking diversion model, Lattimore *et al.*<sup>17</sup> assessed differences among sites within each type of diversion program. Compared with participants in two other prebooking sites, subjects in the Memphis model were more likely to have had a diagnosis with psychotic features (50% compared with about 20% in the

other sites), more psychiatric hospitalizations in the three months before criminal justice contact (30% compared with less than 20%), and more emergency room visits for substance abuse or mental health concerns in the prior three months (33% compared with about 20%). Aside from the fact that different models of diversion (prebooking versus postbooking) often target different populations, these findings indicated a need for tailored programs to accommodate the various demographic and mental health needs that may exist among individuals who are diverted by prebooking programs such as CIT.

Naples and Steadman<sup>18</sup> studied 650 people involved in three prebooking programs (including Memphis) and four postbooking programs. They found no significant differences in 12-month outcomes among diverted individuals with violent ( $n = 113$ ) and nonviolent ( $n = 537$ ) charges. No differences were found in demographic variables, drug use, social functioning, receipt of previous treatment, or 12-month outcomes such as violent acts or utilization of inpatient or emergency services. The authors used these findings to suggest that excluding individuals with violent charges at intake from eligibility for jail diversion programs is unnecessary on empirical grounds.

In a cost-effectiveness study, Cowell and colleagues<sup>19</sup> surveyed one prebooking (the Memphis CIT program) and three postbooking (Lane County, Oregon; New York City; and Tucson, Arizona) diversion sites from the perspective of the taxpaying community, which included the costs incurred by all publicly funded agencies that were directly involved with the jail diversion program. Thus, cost domains of two types were considered: the criminal justice system (courts, public defenders' and prosecutors' offices, police, and jails), and the health care system (inpatient care, residential substance abuse treatment, outpatient treatment, emergency room visits, evaluations, and case management). Effectiveness outcomes included measures of criminal behavior, quality of life, substance abuse, and mental health status. Although the Memphis CIT program was associated with a significant amount of cost savings from the criminal justice perspective, higher treatment costs counteracted these savings, as would be expected. Of importance, the Memphis model of prebooking jail diversion was associated with improvements in psychiatric symptoms as measured by the Colorado Symptom Index at three months after diversion.

### ***Other Related Research Findings***

Though not published as formal research reports, Dupont and Cochran have presented several important research findings pertaining to CIT at conferences and have summarized these findings in a seminal review article.<sup>1</sup> They reported that CIT implementation appears to be associated with decreased use of high-intensity police units such as Special Weapons and Tactics (SWAT) teams, a lower rate of officer injuries, and increased referral of individuals with mental illnesses to treatment facilities by law enforcement officers.

Presenting unpublished data at the First National CIT Conference in 2005, Addy and James<sup>21</sup> reported on their efforts to develop a set of best practices for the CIT program by qualitatively evaluating the effectiveness of the Memphis model and its adaptability to other law enforcement agencies trained in the Memphis model. Utilizing a sample that included Memphis Police Department's training and command staff, CIT officers, Memphis model developers, and officers from other precincts, evaluators asked CIT

officers to comment on topics such as overall experience with program design and instruction, and interactions with mental health consumers. Key informants elaborated on such concerns as the content validity of the CIT program with regard to current societal pressures and congruency between classroom instruction and the needs of mental health consumers. Recommendations, based on the study's findings, emphasized the need to establish a training program committee to focus on standardization and curriculum development, adhere to a best practices protocol in provision of curriculum components, create a schedule to review and revise training curricula, and provide in-service or continuing education training opportunities.

In Maine, a program evaluation assessed the process and outcomes of an implementation of a CIT program in a county jail system (unpublished data, 2005).<sup>22</sup> Given that this was an initial attempt to apply the CIT program in a correctional setting, evaluators used quantitative and qualitative indicators in the framework of a pre/post quasi-experimental study to identify areas for both short- and intermediate-term changes. Among other findings, the evaluation results demonstrated that CIT improved collaboration between county jail staff and mental health providers.

Several additional reports document descriptive statistics, specific to individual CIT programs. These reports, though important in tracking programs' progress, were not included in our review because of their limited depth of exploration into CIT. For example, Munetz and coworkers<sup>23</sup> reported that Akron's CIT officers used a taser in lieu of guns in 35 incidents, of which 21 involved individuals with mental illnesses, over the course of 18 months. Cameron *et al.*<sup>24</sup> reported that Colorado's CIT officers transported 76 percent of consumers to the hospital and spent an average of 70 minutes per incident (unpublished data, 2005).<sup>24</sup> In Albuquerque, New Mexico, Bower and Pettit<sup>25</sup> found that CIT officers responded to 271 calls per month, and transported 48 percent of consumers to the emergency room. Other publications describe statewide CIT programs,<sup>5,7</sup> provide theoretical and conceptual frameworks for understanding CIT,<sup>26-28</sup> and present research on police officers' perceptions, attitudes, and responses not specific to CIT.<sup>29,30</sup>

## ► Discussion

The studies mentioned herein provide preliminary support for the notion that the CIT model may be an effective component in connecting individuals with mental illnesses who come to the attention of police officers with appropriate psychiatric services. Early research indicates that the training component of the CIT model may have a positive effect on officers' attitudes, beliefs, and knowledge relevant to interactions with such individuals, and CIT-trained officers have reported feeling better prepared in handling calls involving individuals with mental illnesses. On a systems level, CIT, in comparison to other pre- and postdiversion programs, may have a lower arrest rate and lower associated criminal justice costs. This is not surprising given that, by definition, the diversion associated with CIT occurs at prebooking.

Researchers to date have examined somewhat intermediate, often officer-level, outcomes but have suggested extrapolations to more distal patient-level outcomes. For example, as mentioned, Compton

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and colleagues<sup>13</sup> suggested that officers' attitudinal and knowledge changes may have important implications such as better outcomes for patients in terms of referrals to mental health services, and Strauss and associates<sup>16</sup> suggested that CIT officers are not only accurately identifying individuals in need of psychiatric care, but are likely to reduce psychiatric morbidity by referring individuals with severe mental illnesses to treatment earlier than might occur otherwise. Clearly, as research on CIT becomes more formalized and rigorous, the connection between officer-level outcomes and patient-level outcomes must be demonstrated. Furthermore, though results to date are promising, research has yet to tease out the program's components that are most important when implementing CIT in diverse jurisdictions. For localities focusing almost solely on the officer-training aspect of CIT (which has been the focus of most of the limited CIT research to date), patient- and systems-level benefits may be difficult to demonstrate unless training is complemented by the system reforms of the Memphis model, such as dispatcher involvement and the availability of a single point of drop-off and adequacy of treatment services in the community. Without accessible nonjail options, prebooking jail diversion models such as CIT will not realize their potential to yield positive results.<sup>10</sup> There is controversy over whether a CIT program can be implemented only in a community with an identified crisis center for officers to use as a single-point drop-off or whether CIT can begin simply by having a partnership between stakeholders. It could be that relationship changes resulting from such partnerships are more critical than structural changes within the system of care. This question could be studied through research across programs.

Assessing outcomes of CIT requires an understanding of its goals. The explicit mission and overarching goal of the CIT program in Memphis is as follows:

The Crisis Intervention Team (CIT) program is a community partnership working with mental health consumers and family members. Our goal is to set a standard of excellence for our officers with respect to treatment of individuals with mental illness. This is done by establishing individual responsibility for each event and overall accountability for the results. Officers will be provided with the best quality training available, they will be part of a specialized team which can respond to a crisis at any time and they will work with the community to resolve each situation in a manner that shows concern for the citizen's well being. (<http://www.memphispolice.org/crisis%20intervention.htm>).

However, different communities may have different goals, and the overall purpose of CIT may vary across stakeholders. That is, the goals of CIT can be viewed from different perspectives: some see it as an officer safety program, others as an officer educational in-service training, and yet others as a community safety effort, a risk management program, or a type of jail diversion, among other viewpoints. Some research outcomes, such as changes in attitudes of officers, may be important only if attitudinal changes lead to behavioral changes. Reports on specific programs should state the program's goals, given that these goals presumably inform research questions.

Studies to date have had serious methodological limitations. For example, many studies have failed to include control groups, and for those that have had control groups, determinations of differences between the groups before CIT training typically are not provided. These problems, in addition to

relatively small sample sizes, limitations in generalizability of findings to other municipalities due to the highly local nature of the studies, and failure to use multivariable analyses, must be rectified as CIT research advances. Nonetheless, it should be recognized that interventions such as CIT, which are implemented in truly real-world settings are very difficult to study. However, research is crucial, especially considering that CIT is uncritically being touted as a model program and being adopted rapidly and broadly.

Having just begun to establish a preliminary base of research, a more formal approach grounded in behavioral sciences and health services research is needed. Domains of research interest could include (but are not limited to) dissemination and implementation of CIT in diverse municipalities; factors that strengthen or impede the program's full utilization and potential effectiveness; immediate, intermediate, and long-term outcomes for police officers; the manner in which officers apply their training in the field; immediate, intermediate, and long-term outcomes for patients interacting with CIT officers compared with those interacting with non-CIT officers; patterns of service utilization over time after interacting with a CIT officer; consumers' and family members' perspectives on their interactions with CIT officers; cost-effectiveness of the program; and potential benefits of CIT-associated partnerships in terms of reform of local mental health systems. In light of preliminary research examining changes in attitudes of police officers and given that CIT is often thought to bring about change in the larger community, attitudinal changes in mental health professionals, consumers, and families involved in CIT would be interesting to explore. Also, this review did not locate any studies addressing the ethics and legal concerns inherent in the CIT model (e.g., confidentiality, risk assessment, and boundaries between policing and mental health), and the dearth of literature on these concerns is in itself important to note. Such potential ethics and legal challenges should become part of the research agenda for CIT.

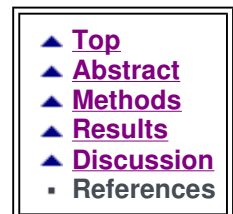
Much of the research to date has focused on the Memphis program itself, which is not surprising, bearing in mind that Memphis is where CIT had its inception and was developed. But given that the Memphis model is being disseminated and widely implemented (with unproven fidelity to the model), research at other sites that are using CIT is greatly needed. It should be noted that the essential elements constituting the Memphis model are still being elucidated. Some CIT proponents would argue that programs that do not include dispatcher involvement, single or multiple drop-off points, and adequate community treatment services are not "Memphis model" programs. The Memphis model is promoted as "more than just training," and this implies that the community partnerships among law enforcement, mental health professionals, and advocacy groups are of utmost importance. For example, as described by Steadman and colleagues,<sup>31</sup> specialized crisis response sites, centralized sites open 24 hours a day to which officers can bring individuals in need of psychiatric assessment, may be a critical factor for the success of CIT programs. Such sites serve as a single point of entry; have psychiatric, substance abuse, and medical assessment capacity; and utilize "police-friendly" policies such as no refusal and streamlined, rapid intake so that officers can return to their regular patrol duties.<sup>31</sup> Work is currently under way to identify, largely by expert consensus, the essential elements of CIT. Once elaborated, studies can determine what differences emerge depending on the presence or absence of specific elements. Until the identification of essential elements is accomplished and without a determination of what elements are present in a given CIT program, it remains difficult to compare outcome findings

from one program to the next. Future research will be strengthened by assessing fidelity to the identified essential elements when studying key outcomes.

Dissemination of research on CIT is a crucial consideration. Academic health service researchers will be interested in such research to develop timely and relevant research questions based on the existing literature. Law enforcement and advocacy groups will incorporate research findings by modifying and enhancing program components based on outcomes of evaluations and formal studies. Forensic psychiatrists and those training in forensic psychiatry will be interested in CIT research due to its focus on the program's position in the interface between law enforcement/criminal justice and mental health/psychiatry. Given the diverse audiences that will make use of CIT research, multiple journal readerships must be targeted (e.g., those with interests in law enforcement, mental health services, and forensic psychiatry), and diverse dissemination methods should be employed (e.g., scholarly journals, law enforcement conference presentations, and dissemination to CIT coordinators via the Internet).

## ► References

1. Dupont R, Cochran S: Police response to mental health emergencies: barriers to change. *J Am Acad Psychiatry Law* 28:338–44, 2000[[Medline](#)]
2. Deane MW, Steadman HJ, Borum R, *et al*: Emerging partnerships between mental health and law enforcement. *Psychiatr Serv* 50:99–101, 1999  
[\[Abstract/Free Full Text\]](#)
3. Bureau of Justice Assistance: Law Enforcement/Mental Health Partnership Program. [http://www.ojp.usdoj.gov/BJA/grant/LE\\_MHPPartnership.pdf](http://www.ojp.usdoj.gov/BJA/grant/LE_MHPPartnership.pdf). Accessed February 26, 2007
4. Cochran S, Deane MW, Borum R: Improving police response to mentally ill people. *Psychiatr Serv* 51:1315, 2000[[Free Full Text](#)]
5. Munetz MR, Morrison A, Krake J, *et al*: Statewide implementation of the Crisis Intervention Team program: the Ohio model. *Psychiatr Serv* 57:1569–71, 2006[[Abstract/Free Full Text](#)]
6. Oliva JR, Haynes N, Covington DW, *et al*: Crisis Intervention Team (CIT) programs, in *Responding to Individuals With Mental Illnesses*. Edited by Compton MT, Kotwicki RJ. Sudbury, MA: Jones and Bartlett Publishers, Inc., 2006, pp 33–45
7. Oliva JR, Compton MT: A statewide Crisis Intervention Team (CIT) initiative: evolution of the Georgia CIT program. *J Am Acad Psychiatry Law* 36:38–46, 2008[[Abstract/Free Full Text](#)]
8. Daly R: Police learn better response to people with mental illness. *Psychiatric News*. March 3, 2006, p 25
9. Teller JLS, Munetz MR, Gil KM, *et al*: Crisis intervention team training for police officers responding to mental disturbance calls. *Psychiatr Serv* 57:232–7, 2006[[Abstract/Free Full Text](#)]
10. Wells W, Schafer JA: Officer perceptions of police responses to persons with a mental illness. *Policing: Int J Police Strategies Manage* 29:578–601, 2006
11. Borum R, Deane MW, Steadman HJ, *et al*: Police perspectives on responding to mentally ill people in crisis: perceptions of program effectiveness. *Behav Sci Law* 16:393–405, 1999
12. Ritter C, Teller JL, Munetz M, *et al*: The quality of life of people with mental illness: consequences of pre-arrest and post-arrest diversion programs. Presented at Second National CIT Conference, Orlando, Florida, September, 2006
13. Compton MT, Esterberg ML, McGee R, *et al*: Crisis intervention team training: changes in knowledge, attitudes, and stigma related to schizophrenia. *Psychiatr Serv* 57:1199–202, 2006  
[\[Abstract/Free Full Text\]](#)



14. Bahora M, Hanafi S, Chien VH, *et al*: Preliminary evidence of effects of Crisis Intervention Team training on self-efficacy and social distance. *Admin Policy Ment Health Ment Health Serv Res*, in press
15. Steadman HJ, Deane MW, Borum R, *et al*: Comparing outcomes of major models of police responses to mental health emergencies. *Psychiatr Serv* 51:645–9, 2000[[Abstract/Free Full Text](#)]
16. Strauss G, Glenn M, Reddi P, *et al*: Psychiatric disposition of patients brought in by crisis intervention team police officers. *Community Ment Health J* 41:223–8, 2005[[Medline](#)]
17. Lattimore PK, Broner N, Sherman R, *et al*: A comparison of prebooking and postbooking diversion programs for mentally ill substance-using individuals with justice involvement. *J Contemp Crim Just* 19:30–64, 2003
18. Naples M, Steadman HJ: Can persons with co-occurring disorders and violent charges be successfully diverted? *Int J Forensic Ment Health* 2:137–43, 2003
19. Cowell AJ, Broner N, Dupont R: The cost-effectiveness of criminal justice diversion programs for people with serious mental illness co-occurring with substance abuse: four case studies. *J Contemp Crim Just* 20:292–325, 2004
20. Steadman HJ, Deane MW, Morrissey JP, *et al*: A SAMHSA research initiative assessing the effectiveness of jail diversion programs for mentally ill persons. *Psychiatr Serv* 50:1620–3, 1999 [[Abstract/Free Full Text](#)]
21. Addy C, James RK: An executive summary: finding the best Crisis Intervention Team practices for law enforcement agencies in the United States. Presented at First National CIT Conference, Columbus, OH, May, 2005
22. Public Health Research Institute: Evaluation report of NAMI CIT implementation at the Androscoggin County Jail. Portland, ME: Public Health Research Institute, 2005. Available at: [http://www.nami.org/Content/Microsites186/NAMI\\_Maine/Home174/FAMILY\\_Newsletter-Winter\\_2006/CITFinalReportDRAFT\\_12.31.05.pdf](http://www.nami.org/Content/Microsites186/NAMI_Maine/Home174/FAMILY_Newsletter-Winter_2006/CITFinalReportDRAFT_12.31.05.pdf). Accessed January 26, 2007
23. Munetz MR, Fitzgerald A, Woody M: Police use of the taser with people with mental illness in crisis. *Psychiatr Serv* 57:883, 2006[[Free Full Text](#)]
24. Cameron H, Pasini-Hill D, Cassa J: Statewide implementation of crisis intervention teams (CIT). Presented at First National CIT Conference, Columbus, OH, May, 2005
25. Bower DL, Pettit WG: The Albuquerque Police Department's Crisis Intervention Team: a report card. *FBI Law Enforce Bull* 70:1–6, 2001
26. Hails J, Borum R: Police training and specialized approaches to respond to people with mental illnesses. *Crime Delinq* 49:52–61, 2003[[Abstract](#)]
27. Lamb HR, Weinberger LE, DeCuir WJ: The police and mental health. *Psychiatr Serv* 53:1266–71, 2002[[Abstract/Free Full Text](#)]
28. Munetz MR, Griffin PA: Use of the sequential intercept model as an approach to decriminalization of people with serious mental illnesses. *Psychiatr Serv* 57:544–9, 2006 [[Abstract/Free Full Text](#)]
29. Watson AC, Corrigan PW, Ottati V: Police officers' attitudes toward and decisions about persons with mental illness. *Psychiatr Serv* 55:49–53, 2004[[Abstract/Free Full Text](#)]
30. Watson AC, Corrigan PW, Ottati V: Police responses to persons with mental illness: does the label matter? *J Am Acad Psychiatry Law* 32:378–85, 2004[[Abstract](#)]
31. Steadman HJ, Stainbrook KA, Griffin P, *et al*: A specialized crisis response site as a core element of police-based diversion programs. *Psychiatr Serv* 52:219–22, 2001[[Abstract/Free Full Text](#)]