What Research on Crisis Intervention Teams Tells Us and What We Need To Ask

Amy C. Watson, PhD, and Michael T. Compton, MD, MPH

Developed over 30 years ago, the Crisis Intervention Team model is arguably the most well-known approach to improve police response to individuals experiencing mental health crisis. In this article, we comment on Rogers and colleagues' review (in this issue) of the CIT research base and elaborate on the current state of the evidence. We argue that CIT can be considered evidence based for officer level outcomes and call level dispositions. We then discuss the challenges that currently make it difficult to draw conclusions related to arrest, use of force, and injury related outcomes. More research, including a randomized, controlled trial is clearly needed. But we caution against focusing narrowly on the training component of the model, as CIT is more than training. We encourage research that explores and tests the potential of CIT partnerships to develop effective strategies that improve the mental health system's ability to provide crisis response and thus reduce reliance on law enforcement to address this need.

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There continues to be a great deal of much-warranted attention on strategies to improve police responses to individuals with mental illnesses and those experiencing mental health crises. The Crisis Intervention Team (CIT) model, which was developed over 30 years ago, is arguably the most well-known approach to address this issue. As discussed by Rogers and colleagues,[1] a growing body of research suggests that the CIT model is effective for at least some of its articulated goals. We have previously argued that it can be considered evidence-based for officer-level outcomes such as improved knowledge about mental illnesses; enhanced attitudes about mental illnesses, individuals living with mental illnesses, and treatments for mental illnesses; self-efficacy during interactions with persons with mental illnesses; use of force preferences; and call-level outcomes related to linkage to mental health services.[2] But evidence is more mixed or lacking for "rare event" outcomes related to arrests, injury, and deaths. In this commentary, we briefly describe the CIT model, and then discuss the current state of CIT research laid out by Rogers *et al.*[1] We will then elaborate on the challenges presented in conducting research on the model, which also have implications both for drawing conclusions from the available evidence and for future research. We argue that a full conceptualization of the model will push us to ask different questions and to consider the danger in limiting our focus to making law enforcement better prepared to intervene in mental health crises rather than shifting responsibility for this function to the mental health system and thereby minimizing the role that law enforcement needs to play in the provision of mental health care.

The Crisis Intervention Team (CIT) Model

Rogers *et al.*[1] aptly describe the origins of the CIT model following the shooting of a man experiencing a mental health crisis by a Memphis police officer. They note that the original articulated goal was to improve safety in police encounters, which was a key concern on the heels of that tragedy. The University of Memphis CIT Center, Memphis Police Department, National Alliance on Mental Illness, and CIT International also list goals related to improving police responses to people in crisis and diverting individuals from the criminal justice system when

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Dr. Watson is Professor at Jane Addams College of Social Work, University of Illinois at Chicago. Dr. Compton is Professor of Clinical Psychiatry, Columbia University College of Physicians and Surgeons. Dr. Watson serves on the Board of Directors of CIT International, a nonprofit organization. Dr. Compton previously served on the Board. Address correspondence to: Amy C. Watson, PhD, Jane Addams College of Social Work, University of Illinois at Chicago, 1040 W Harrison St, MC 309, Chicago, IL 60607. E-mail: acwatson@gmail.com.

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appropriate. Until recently, increasing transports of persons in crisis to hospital emergency departments was considered an improvement in response (and it still is if it avoids an unnecessary arrest or leaving someone in need of care without proper linkages). As emergency departments have become overwhelmed, however, there is recognition that they are not an ideal place to address mental health crises. Indeed, over time, the stated goals of CIT have become more nuanced and now include developing more robust community-based crisis-response systems that minimize both the role of law enforcement and the need to utilize emergency departments.[3]

Rogers *et al.*[1] also cover several of the Core Elements of the model: CIT training for a select group of officers, training of communications and dispatch personnel and special coding processes for dispatched calls, and a centralized mental health facility for easy drop-off. What is often overlooked or mentioned only in passing is the foundational element of strong and ongoing community partnerships. These may be evidenced by a steering committee that is formed to initially implement a CIT program and continues to meet and support ongoing operations of the program. Indeed, the "T" of CIT is not "Training," as suggested in the title of the Rogers *et al.* article; rather, it is "Team." Team refers to the community collaboration (including local law enforcement, local mental health advocacy groups, local mental health services, and oftentimes many other stakeholders) that works to improve the local crisis-response system, of which officer training is one element. While generally not examined in CIT research, this foundational collaboration is believed to be essential to successful implementation of the CIT model.[3]

What Does the Existing Research Tell Us?

Rogers and colleagues[1] state that "most of the studies on CIT involve analysis of the planning, deployment, and procedural functioning of the CIT process itself, including the selection, training, operations, and measurement or self-report of CIT-trained officers" (Ref. 1, p xxx). This statement seems overly dismissive and suggests an absence of research that has rigorously examined important outcomes of CIT. It is difficult to know what studies were reviewed by the authors, but it appears that they failed to consider a number of them in drawing conclusions. For example, Rogers *et al.*[1] are correct when they indicate that we have evidence of CIT training's effectiveness for "increasing officer satisfaction," though it would be more accurate to indicate that the evidence supports CIT's effectiveness for improving other, more important officer-level outcomes in terms of knowledge, attitudes, self-efficacy, force preferences, and decision-making.[2] The authors failed to report on the most robust and large-scale study in this area, in which Compton *et al.*[4,5] recruited 586 police officers from six police agencies that had implemented CIT; 251 of those officers had previously received CIT training, at a median of 22 months before the in-depth research assessment. Officers spent about three hours completing an extensive battery of measures. Compared with non-CIT officers, CIT-trained officers had greater knowledge about mental illnesses and their treatments, better attitudes (across 17 different domains), greater self-efficacy, lesser stigma, better de-escalation decisions, and better referral decisions. Effects were apparent, even at a median of 22 months after the training, and even when controlling for age, gender, years having served as an officer, years of education, officers' extent of personal experience with the mental health system, and empathy. These are much more robust findings than "increased officer satisfaction." Additionally, while Rogers *et al.*[1] indicate "some positive but mixed outcomes or trends toward statistical significance, in terms of increased diversion to psychiatric services" (Ref. 1, p xxx), there is actually good, statistically significant evidence from several studies that CIT increases the use of mental health service linkages to resolve mental health-related encounters.[2,5] There is also evidence that these effects are strongest when officers self-select into the specialist role[6] and in areas with greater availability of mental health services.[7]

The evidence of CIT's impact on safety outcomes is limited. While we did not find a direct effect of CIT on use of force in one of our own studies, we did find that CIT officers used less force with more resistant subjects.[8] Likewise, the evidence of CIT's impact on injuries is understandably very limited given that injuries are rare. In terms of outcomes related to arrest, findings are mixed, with some studies indicating reductions of arrests of persons with mental illnesses and others finding no effect.

The lack of strong evidence for the impact of CIT on arrest and safety outcomes has led some to conclude that CIT is not effective. For example, the

National Institute of Justice's CrimeSolutions.gov[9] rated CIT as not effective for the outcomes of processing offenders (arrest) and use of force based on a meta-analysis by Taheri that included five studies.[10] This rating was broadcast in the Office of Justice Programs' Daily Digest Bulletin (November 20, 2018) with the heading "Crisis Intervention Teams Rated: Crisis Intervention Teams Do Not Reduce Arrest, Use of Force, or Officer Injuries." Given the many difficulties identifying appropriate studies to include in the meta-analysis, which Taheri herself discusses in her article,[10] applying meta-analytic methods was likely premature, as are the conclusions drawn by CrimeSolutions.gov. More recently, in their systematic review of the research on police-mental health interventions that included CIT, Kane and colleagues note, "Due to the limited and varied research evidence in this field, it was not appropriate to produce a GRADE table of findings to identify relevant results, nor was it possible to pool data from included studies nor conduct a meta-analysis" (Ref. 11, p 111). Thus, for arrest and safety outcomes, we cannot yet draw conclusions.

As researchers working in this area for some time now, we have struggled to examine the impact of CIT on arrest, use of force, injuries, and deaths. There are a number of factors that have made this very difficult. First, each of these outcomes occurs relatively infrequently (and for deaths, extremely infrequently) in the course of police work. Low base rates mean that large samples are needed to detect effects. This would seem simple because police agencies document many aspects of police work, such as arrests and uses of force. One might think that we should be able to pull the relevant call data from agency data systems, but many agencies do not have codes that are used consistently to identify calls involving a mental health crisis or a significant mental health component. Those working to implement such coding struggle with the appropriate definition of a mental health call and getting officers to use those codes reliably. This makes it difficult to examine patterns of arrests, force, and injuries in mental health-related calls in a single agency; furthermore, comparing data across agencies is hampered by significant variation in data systems and coding practices. Additionally, while measurement of arrest is straightforward, definitions of force and policies around what, when, and how force is documented are not uniform. For example, in some communities, use of handcuffs is documented as a use of force, and in many cases, when officers transport a person for psychiatric evaluation, agency policy requires the use of handcuffs. In these programs, if CIT officers are doing more transports, they may be using force (by this definition) as often as or more often than their non-CIT counterparts because they are taking more steps to get individuals in crisis into care.

It is even more difficult to consider the impact of CIT on lethal encounters between persons with mental illnesses and police. While extremely tragic, such events are complex and occur rarely. Rogers *et al.* point out that "studies have not shown consistent benefit in terms of a reduction in the risk of mortality or death during emergency police interactions" (Ref. 1, p xxx), but it is not clear what studies they are referencing. We know of no such studies.

Recent attention to police shootings has led to work to improve tracking of these incidents nationally. To test the impact of CIT on such events, however, we will need to be able to measure CIT implementation. This leads to an additional challenge of conducting and considering research on CIT. We know there is significant variation in CIT implementation, with some communities only training a group of officers (or mandating the training for all), and others that work to build partnerships and implement the full model. To date, there is no fidelity tool to support measurement of this variation. Such a tool, if rigorously developed and tested, would be useful to the field.

According to the model and one of its founders, Retired Major Sam Cochran, "CIT is more than just training" (Ref. 12, p 3); nevertheless, much of the available research on the effectiveness of CIT, our own included, may have perpetuated the misunderstanding of CIT as primarily a training model. It is much more feasible to conduct rigorously designed research in a single agency or training academy and compare officers who are CIT trained with those who are not than it is to compare across agencies with and without CIT programs. Such a comparison would require agreements with a large number of agencies and extensive resources, complicated by the lack of good, consistently coded administrative data within and across agencies. There are, however, studies that have examined outcomes both before and after CIT program implementation in single programs, including one using a time series design conducted by Kubiak and colleagues[13] that found an

increase in transports to a crisis triage center following implementation (this study was not included in the Rogers *et al.* review).

Rogers *et al.* express a concern that "with the thousands of CIT programs deployed, there may be a publication bias in terms of a reduction in the likelihood of publication or dissemination of studies identifying a null effect or adverse cost increases or shifts associated with a specific CIT program" (Ref. 1, p xxx); yet, there is no evidence supporting this. The vast majority of CIT programs do not conduct research, consider publication of any data, or disseminate studies.

More research, including a randomized controlled trial, is clearly needed. This, of course, begs the question of what should be randomized. Randomizing officers to the training may be feasible, but this approach suffers from the narrow focus on CIT as a training program. Randomizing calls to a CIT response or not would be operationally very difficult and potentially unethical (unless the other condition is another specialized model such as a co-responder team) given the evidence that we do have for the benefits of CIT. Randomizing agencies to implement CIT or not would require a larger number of agencies of adequate size (or a very large agency with many precincts) willing to let researchers dictate when and if they implement CIT. While a randomized controlled trial would be informative, practical and rigorously designed studies have given good evidence of CIT's effectiveness and have emphasized where evidence is currently lacking, which is very different from being ineffective.

What About Opportunity Costs?

Rogers and colleagues[1] note the potential opportunity costs of spending money on CIT programs that might otherwise be spent on alternative services such as street triage (which involves clinician-officer teams), increased funding for assertive community outreach programs, or psychiatric beds. This is a rather abstract argument given that money saved in law enforcement budgets is not generally available to be transferred to the mental health system. It also misses the fact that CIT programs implemented with fidelity develop partnerships between law enforcement, mental health, and advocacy that work together to coordinate existing services, identify system gaps, and garner resources to develop needed mental health services.

While we hope to continue to do research on CIT and related models, we worry about the opportunity cost of focusing so much on the law enforcement component of CIT and other police-based interventions (e.g., embedded co-response teams) that we and others in this field will fail to explore and test the potential of CIT partnerships to develop effective strategies that improve the mental health system's ability to provide crisis response and thus reduce reliance on law enforcement to address this need. CIT International emphasizes this as a goal of CIT programs in its newly released publication, "Crisis Intervention Team (CIT) Programs: A Best Practice Guide for Transforming Community Responses to Mental Health Crises."[3] Research is needed that conceptualizes CIT as an organizational and community-level intervention and examines its effectiveness not only for improving officer and call-level outcomes, but also for system-level outcomes related to reducing the role of law enforcement in a mental health crisis-response system.

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