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Improving police response to persons with mental illness: A Multi-level conceptualization of CIT

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Abstract

The large numbers of people with mental illness in jails and prisons has fueled policy concern in all domains of the justice system. This includes police practice, where initial decisions to involve persons in the justice system or divert them to mental health services are made. One approach to focus police response in these situations is the implementation of Crisis Intervention Teams (CIT). The CIT model is being implemented widely, with over 400 programs currently operating. While the limited evidence on CIT effectiveness is promising, research on CIT is limited in scope and conceptualization-much of it focusing on officer characteristics and training. In this paper we review the literature on CIT and present a conceptual model of police response to persons with mental illness that accounts for officer, organizational, mental health system and community level factors likely to influence implementation and effectiveness of CIT and other approaches. By moving our conceptualizations and research in this area to new levels of specificity, we may contribute more to effectiveness research on these interventions.

The large numbers of people with mental illness in jails and prisons has fueled policy concern in all domains of the justice system. Strain in the justice system is generated when its commitment to efficiently control deviance and assure public safety is complicated by calls to respond to mental illness in a manner that is more clinical, or therapeutic. This includes police practice, where the initial discretionary decisions are made for a person's formal involvement in the justice system. The options for these on-the-street decisions by police officers are to do nothing, to resolve a situation informally, to arrest, or to seek other formal resolution, such as psychiatric hospitalization. Added tension comes from the awareness that these encounters may be more likely to result in injury to both police officers and people with mental illness (Cordner, 2006). A police officer makes a decision quickly to resolve the disturbance of social order. In that moment, what factors shape more or less effective responses on the part of the officer?

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One approach to focusing law enforcement response in these situations has been the implementation of Crisis Intervention Teams (CIT). CIT programs are hypothesized to improve officers' abilities to effectively, respectfully and safely interact with persons with mental illness and subsequently divert more of them away from the criminal justice system and to mental health services. CIT is being widely implemented in medium and large size cities across the United States as a policy initiative to improve responsiveness to mental illness.

While the evidence of CIT's impact on key outcomes is positive, research on CIT is limited in scope and conceptualization. To date, research has focused primarily on the effects of training on officer ability to identify persons with mental illness and their confidence in responding. This research could be biased by allegiance effects (Luborsky, 1999), where the promotion of the idea has driven its dissemination without a sufficiently critical look at the elements of intervention and effectiveness. Despite the limited and possibly biased evidence, there has been an organized effort to diffuse Crisis Intervention Teams across police agencies (Bureau of Justice Assistance, 2006).

In this article, we briefly review relevant literature on police interactions with persons with mental illness and consider the available evidence on CIT. We then present a model for understanding CIT implementation and effectiveness that expands beyond the currently narrow focus on training and outcomes of training. Drawing from the organizational behavior, criminology and sociology of deviance literatures, we consider individual, organizational and community level factors that may influence implementation and outcomes in a local policy context.

Framing the Issue

Studies indicate that up to six percent of individuals considered suspects by police have a serious mental illness (Engel & Silver, 2001; Teplin & Pruett, 1992). Medium and large police departments estimate that 10% of their contacts with the public involve persons with mental illness (Cordner, 2006; Deane, Steadman, Borum, Veysey, & Morrissey, 1999). Considering the larger category of impaired individuals (e.g. intoxicated, experiencing psychiatric symptoms) in arrest situations, this number becomes much higher with estimates around 20% (Kaminski, DiGiovanni, & Downs, 2004). Furthermore, police officers typically spend more time dealing with a mental disturbance call than they spend on calls involving traffic accidents, burglaries or assaults (Cordner, 2006). Police officers report such situations as problematic because persons with mental illness may not respond well to traditional police tactics (Engel, Sobol, & Worden, 2000). Because the mental health system offers limited options for resolving these situations (Borum, Deane, Steadman, & Morrissey, 1998), police officers become the gatekeepers of the criminal justice and mental health systems. Their abilities and capacity to manage these encounters significantly influence whether individuals receive treatment, remain in their current situation, or face the problems inherent in a criminal justice system ill prepared to meet their needs (National Counsel of State Governments, 2002). Lack of knowledge and skills on behalf of police officers can cause them to respond with undue force (Ruiz, 1993; Ruiz & Miller, 2004); fail to assist a victim with mental illness (National Council of State Governments, 2002; Watson, Corrigan, & Ottati, 2004a, 2004b); or fail to refer a person to appropriate community services. Lack of resources may also influence the options they have available to resolve the call, and in some cases lead to "mercy booking," an arrest intended for the safety and care of the arrestee (Bureau of Justice Assistance, 2006; Wells & Schafer, 2006).

Outcomes of police encounters with persons with mental illness

These encounters can be dangerous for police officers and persons with mental illness. The majority of individuals that assault police officers are under the influence of drugs or alcohol

and/or have a psychiatric disorder (Kasminski et al., 2004). However, these incidents may be most dangerous for people with mental illness (Cordner, 2006; Ruiz and Miller, 2004)). One explanation for assaults/injuries in these encounters is the manner in which officers respond to persons with mental illness. Often, officers perceive mental disturbance to be dangerous. Lacking the de-escalation skills necessary for working with people with mental illness, officers may approach forcefully in order to resolve the situation quickly. This approach may escalate the situation to violence and injuries to the officer and the person with a mental illness (Ruiz & Miller, 2004).

While arrest is the disposition most often associated with police encounters among the general population, order maintenance activities are actually more descriptive of how police spend their time. When arrest is employed, it is largely explained by officer characteristics, situational characteristics, organizational policies and available options (Bittner, 1970; Chappell, MacDonald, & Manz, 2006; Goldstein, 1976; Klinger, 1997). Among other factors explaining the decision to arrest in a community setting are the unpredictable demeanor of a subject (c.f. Crank, 1998), a high level of conflict between the subject and the officer (Alpert & Dunham, 1988), the presence of family members and family member demands for action (National Council of State Governments, 2002), and neighborhood structural disadvantage (Terrill & Reisig, 2003).

Training such as the CIT curriculum may influence an officer's knowledge and attitudes about mental illness (Compton et al., 2006) and subsequently, their assessment of some of these situational factors. Officers who can reliably understand how these factors relate to mental illness may be more apt to decide to access mental health treatment in lieu of arrest (Wells & Schafer, 2006). But to fully explain the use of mental health services, the availability of mental health treatment options should also be accounted for.

Pre-booking diversion interventions such as CIT are promoted to increase the tools available to the police so that they will make fewer arrests and instead refer more people with mental illness to treatment (Draine & Solomon, 1999). Originally, the primary goal of CIT was to reduce officer and citizen injuries. Over time, the goal of diverting persons with mental illness from the criminal justice system when appropriate has emerged as equally as important among many stakeholders (Thompson & Borum, 2006).

Advocates, researchers, and policy makers have asserted that in encounters between police and persons with mental illness, diversion to treatment instead of arrest is more "appropriate" (Teplin, 1984). Given the research on both persons with mental illness in the community and the complexity of police decision making, it is difficult to operationalize what is meant by "appropriate." Such normative judgments may serve to further stigmatize people with mental illness by further removing them from the roles of citizenship. However, we can conceptualize and empirically assess the extent to which police encounters are more or less likely to result in arrest or other outcomes and the mechanisms by which interventions such as CIT may influence these outcomes.

A Rapidly Spreading Police Based Intervention, CIT

Based on a model developed by the Memphis Police Department, Crisis Intervention Teams are a police-based pre booking approach with specially trained officers that provide first line response to calls involving a person with mental illness and who act as liaisons to the mental health system (Borum et al., 1998). Rooted in a problem solving approach, the Memphis Model aims to address the issues underlying the reason for the call rather than "simply incapacitating the individual or removing him or her from the community" (Thompson & Borum, 2006, p. 27). Patrol officers volunteer to become CIT officers, and if selected, receive 40 hours of specialized training. When a call is identified by dispatch as involving a person with mental

illness, a CIT officer is dispatched and is given the authority of officer in charge, regardless of rank. This officer assesses the situation and may resolve it via de-escalation and negotiation, transport to emergency psychiatric services, provision treatment referrals or arrest if appropriate (Cochran, Deane, & Borum, 2000). Key to the model is partnerships with local advocacy groups and providers. In particular, the Department has an arrangement with the University of Memphis Medical Center's psychiatric emergency department that serves as a no refusal central drop off for police, accepting all police referrals immediately and minimizing officer waiting time.

Essential elements of CIT believed to enhance police response are specialized training of officers (usually 40 hours), forging law enforcement partnerships with mental health community resources and shifting police roles and organizational priorities from an exclusively traditional law enforcement model that reluctantly dealt with persons with mental illness to a more service oriented model that responds to mental illness as a community safety and public health concern (National Council of State Governments, 2002). Jurisdictions have adapted these essential elements based on the needs and available resources of their local realities. The Consensus Project report provides valuable information about differences in CIT programs including specific examples of departments that have altered the implementation of CIT in their locality (National Council of State Governments, 2002). Modifications in training and staffing best exemplify these differences. For example, because of the agency's small size, in Athens-Clarke County, Georgia, every officer receives CIT training to respond to people with mental illness. The centralized drop off is another component of CIT that is frequently adapted due to available local resources. Some communities have agreements to fast-track people with mental illness brought to the emergency rooms, others rely on a mobile crisis team to transport people with mental illness for medical care and still others have centralized registries to help officers find empty hospital beds for people with psychiatric needs (National Council of State Governments, 2002). Unfortunately, for some jurisdictions attempting to implement CIT, the development of arrangements with mental health providers falls to the wayside, leaving officer training as the primary element of the program (Wells & Schafer, 2006). Since the Consensus Project report, more localities have adopted CIT including Philadelphia, PA and Chicago, IL, which have both created their own training modules.

A recent Bureau of Justice Assistance report estimated there are over 400 CIT programs operating in the United States (Bureau of Justice Assistance, 2006). With such rapid diffusion of the intervention, the quantity and quality of CIT activities implemented across police departments is difficult to assess. We know that many communities have adapted the Memphis CIT curriculum and model to their own needs. What is less clear is how the programs differ across communities and whether these variations relate to the effectiveness of the program in meeting its goals and objectives. A more fully specified model of effectiveness could account for variance in the model implementation and link these variations to the effectiveness of CIT.

Programs like CIT can be difficult for organizations to fully adopt because they involve making large scale changes to almost every facet of police operations—from training and scheduling to dispatch and patrol as well as forging partnerships with the mental health community. In the current landscape of CIT, one organization can make changes to their training requirements while another can make systemic changes to all standard operating procedures and both agencies can purport to practice the program. These differences make it difficult to measure the effectiveness of CIT as whole—rather it is the extent to which CIT is being implemented that should be of interest to researchers measuring its effectiveness.

CIT requires that a strong commitment be made on the part of the agency and community partners to insure full implementation. The diffusion literature suggests that in a hierarchical organization like a police department, the acceptance of an innovation may be difficult to obtain

(Rogers, 2003). In general, organizations that have a greater degree of openness—meaning the degree to which members of a system are linked to other individuals located external to the system—are more innovative. Police departments may have difficulty in collaborating with external agencies because of their culture and often quasi-military operations (Bittner, 1970) making innovations more difficult to adopt. For a new innovation such as CIT to be successful, both patrol officers and middle managers as well as citizens and community partners must accept that this program will be beneficial for them. Without winning "the hearts and minds" of officers, the adoption of CIT is inhibited (Lurigio & Skogan, 1994).

Police history is littered with similar innovations that police agencies have failed to fully adopt for these reasons. For example, in the 1950s police departments adopted Police/Community Relations units designed to reach out to citizens living in the community. This program ultimately failed because its mission was viewed as out of line with 'real policing' (Trojanowicz & Bucqueroux, 1990). Based on these experiences, team policing initiatives were developed in police agencies during the 1970s. Team policing was also intended to build better relations with the community by making police assignments geographically based allowing citizens to become familiar with the officers on the team assigned to their neighborhood (Trojanowicz & Bucqueroux, 1990). Team policing was unsuccessful because it was viewed by officers as just another program that was unlikely to survive and was believed to be separate from the organizations' other activities. As such, for CIT to fare differently from these other programs, its stated goals have to fall within the mission of police organizations and have clearly beneficial consequences for its users or adopters.

The Evidence So Far

Traditionally, police work has been measured in terms of crime suppression and control. As a result, low crime statistics, fast response times and high clearance rates have become the standard to which police agencies are held. Changes in crime rates, however, may not be the most effective way to measure the impact of CIT. This creates a significant challenge for police departments, many of which lack the internal record keeping capabilities to determine if CIT has met its goals. Because of these difficulties, the empirical evidence base for CIT's effectiveness in terms of those and other goals is limited, but growing. However, as we will discuss, the existing conceptualizations and research on CIT effectiveness have been narrow in scope and lack attention to broader contextual forces that may shape implementation and outcomes.

Two early related studies involved comparisons of three types of specialized response: police-based police response, which involves specially trained police officers; police-based mental health response, which involves mental health clinicians working as civilian employees of the police department; and mental health based mental health response, which involves partnerships with mobile mental health teams that are part of a community mental health center. One of the studies compared case dispositions from three departments, each with one of the specialized response programs. All three departments had relatively low arrest rates for mental health calls. The rate for the department with CIT (Memphis) was the lowest at 2% (Steadman, Deane, Borum, & Morrissey, 2000).

The other study surveyed officers' perceptions of the effectiveness of their department's specialized response (Borum et al., 1998). Both CIT and non CIT officers from the department with CIT were significantly more likely to rate their department's response as effective in meeting the needs of individuals in crisis, diverting persons from jail, minimizing officer time spent, and maintaining community safety.

A more recent study of CIT in Akron, Ohio examined police dispatch log data on mental disturbance calls pre and post CIT implementation (Teller, Munetz, Gil, & Ritter, 2006). While

they did not find significant changes in arrest rates for these calls, there were significant increases in the number and proportion of mental disturbance calls identified, overall rates of transports to emergency treatment facilities by CIT-trained officers, and voluntary transports subsequent to CIT implementation. This suggests CIT improved identification and response to persons with mental illness.

Other outcomes of CIT programs have been explored in the literature. A recent study in Louisville, KY found that CIT trained officers were able to correctly identify individuals with mental illness (Strauss et al., 2005). The authors did not have a baseline comparison so it is not clear if officers were equally efficient prior to the adoption of CIT. Several recent studies that have surveyed officers pre and immediately post CIT training have found improvements in both attitudes and knowledge about mental illness (Compton et al., 2006) and improvements in officers' confidence in identifying and responding to persons with mental illness at post test (Wells & Schafer, 2006).

Thus, evidence to date suggests that CIT training improves officer knowledge, attitudes and confidence, at least in the short term (Compton et al., 2006; Wells & Schafer, 2006). These studies, however, do not detail the extent to which CIT is adopted or the role of the mental health system. In the limited studies available, CIT implementation appears to increase officer confidence in responding to persons with mental illness (Borum et al., 1998); identification of mental illness; and transports to emergency treatment facilities (Teller, Munetz, Gil, & Ritter, 2006). There is no evidence to suggest that the other outcomes of CIT have been realized. In particular, it is not clear that the implementation of CIT has decreased arrests of persons with mental illness. Given the various methodological and resource constraints inherent in evaluating applied interventions, none of these studies included control groups or modeled important organizational and contextual factors likely influence CIT implementation and the outcomes of interest. The literature does not tell us which components of CIT are most important to which outcomes, or under what conditions CIT is likely to be most effective.

The basic assumptions underlying CIT, that training coupled with new policies for dispatch and patrol along with partnerships with mental health providers will increase linkage to mental health services for people with mental illness, reduce the use of force during encounters, and decrease arrests and injuries to both citizens and officers, remain untested against a rival hypothesis that the availability and ease of linkage to mental health treatment is the principal mechanism for effecting these outcomes. If this rival hypothesis were supported, then CIT would be one of several ways to achieve the goal of greater police access to treatment options and safer interactions. Other policies and service schemes could be also marshaled to the same end and may be necessary where treatment options are scarce.

CIT can be conceptualized as supporting a shift in police discretion that accounts for mental illness. This shift includes institutional supports as well and training and education. The implementation of CIT is presumed to have wide ranging effects. It should enhance the skills of officers in encounters with those who have mental illness and their families, reduce the need for force by officers, reduce the incidence of violence in these encounters by persons with mental illness, reduce the incidence of arrest, reduce the incidence of injury to all parties involved, and increase access to crisis and other psychiatric treatment. These concepts can be readily measured. A more challenging question is how to study change in these concepts in a way that can assess the effectiveness of police interventions such as CIT. This challenge is apparent in outcomes such as reduced shootings. In a police department, what does a change of one or two shootings over a year mean in terms of effectiveness of CIT? By more thoroughly conceptualizing these outcomes, we may find opportunities to develop evidence for components of the logic of CIT effectiveness, refine the model, and move toward testable outcome models.

Conceptualizing Police Response at Multiple Levels

As highlighted above, much of the literature and research on CIT has focused on the effect of training on officer attitudes, recognition of mental illness, injuries, and call dispositions. While some of the literature acknowledges the importance of other "key elements" (e.g. centralized mental health drop off), the conceptualizations and evidence are not well developed. Here we present a model that includes considerations of individual officer characteristics and behaviors and the effect of training. We further develop our conceptual model to incorporate "key" organizational, community and systems level factors that influence police response and the outcomes of these encounters (See Figure 1).

Individual officer characteristics and the impact of specialized training on knowledge, attitudes and de-escalation skills

A cornerstone of the CIT model is 40 hours of specialized training for a select group of officers. This training typically involves education about the causes, signs, symptoms and treatment of mental illness; information on commitment criteria and procedures; personal stories from consumers and family members; visits to treatment providers; and training in communication and de-escalation skills, which often includes role play exercises (Rueland, 2004). Some would argue that de-escalation training is the "active ingredient" that effects officers' ability to resolve a call without the use of force, injury, or arrest (Cordner, 2006) and several studies examining CIT effectiveness focus on the training as the intervention and report pre-and post measures of individual officer variables such as knowledge, attitudes, and behavioral intentions (Compton et al., 2006; Wells & Schafer, 2006). While it seems common sense that the training is a necessary component to improving interactions with people with mental illness, the existing research does not discuss whether training and how much is sufficient for improving outcomes.

It has been noted as important that CIT officers are a select group of volunteers (Spaite & Davis, 2005). Such volunteers may have specific characteristics that enhance the likelihood of reduced arrests and injury in encounters with persons with mental illness and increased psychiatric service access (Thompson & Borum, 2006; Watson & Angell, in press). These characteristics may be associated with pre CIT knowledge, attitudes and skills as well as the effect of CIT training on outcomes of interest. Thus, we include individual officer characteristics such as demographics, prior training, and familiarity with mental illness and completion of CIT training in our model. We do not stop there; however, as we hypothesize that other components of CIT and contextual factors determine the opportunities and options for individual officers to apply their knowledge and skills on the job.

The Organizational Context: Saturation and Champions

As Major Sam Cochran, Memphis CIT Coordinator and founding member, has stressed, "CIT–It's more than just training" (Cochran, 2004). CIT is an organizational intervention that represents a shift in operating practices in relation to persons with mental illness. Thus, organizational factors are important to conceptualize when considering CIT implementation and effectiveness. For smaller police departments, it may be sufficient to conceptualize these factors at the departmental level. Larger urban police departments are responsible for larger areas and populations and tend to be divided into organizational subunits called districts or precincts in which the work of officers is geographically bounded. Areas bounded by districts may vary significantly in terms of the community demographics and resources. Districts have their own supervisory structure under the central command of the department. Therefore, when conceptualizing organizational factors, it may be useful to consider them at both the Department and District/Precinct level. We include two organizational/district level factors in our model of CIT implementation and effectiveness: saturation and the presence of a champion (see figure 1).

Saturation—Recommendations on optimal CIT staffing range from 15–25% of all patrol officers in order to ensure 24/7 CIT coverage (Rueland, 2004; Thompson & Borum, 2006). However, the optimal numerical saturation level has not been empirically tested. Our model conceptualizes saturation as a factor influencing implementation and outcomes and allows for consideration of optimal saturation levels under varied conditions.

Another form of saturation is attitudinal. To what extent do officers in the district accept CIT as legitimate and valuable approach to responding to persons with mental illness? In most departments, there is likely to be some resistance to a new way of responding to mental disturbance calls. This begs two questions, what level of attitudinal saturation (among CIT and other officers) is necessary for CIT to influence encounter outcomes? And at what point are enough officers involved in CIT (numerical saturation), before it is accepted at the District/ Precinct level and by the larger organization? Rogers (2003) refers to the critical mass in the diffusion of an innovation. Critical mass is the point after which diffusion becomes self-sustaining and has mainly been used to understand the diffusion of technological innovations by individuals (c.f. Fischer, 1992) but can be applied to other organizational innovations as well. Rogers (2003) gives the example that a single log in a fireplace will not continue to burn by itself. A second log must be present so that each log reflects its heat onto the other (p. 349). Based on this literature, we can expect CIT to have an impact because small changes can trigger larger changes. For example, a small change in the response to persons with mental illness by a small group of officers, triggers a big change in how the department overall treats this population. It may not be necessary to have officers trained for every shift or in every district-the change triggered by a small group of CIT officers may be enough. Just how many officers must be trained before CIT is an accepted service of the department? Until there is a significant change in practice and outcomes? Our model will allow this to be examined.

Champion—A key element of a new police program such as CIT is that of the "champion" (Rogers, 2003). In most jurisdictions, officers become part of the CIT program by choice, rather than by top down assignment. The decision and motivation to accept the legitimacy of the CIT program or to take the next step and volunteer may be largely dependent on the strength and influence of the "champion". Officer support for new program is often based on cues that the new program is important and supported by command staff and will aid their advancement in the organization (c.f. Nowicki, 1997, 2000). If officers do not believe that participation in or cooperation with the CIT program will affect their performance evaluation and opportunities for promotion, individual saturation will be negatively affected. A 'champion' can send the message to line officers that CIT participation and cooperation is valued within the agency. The presence of a champion can therefore, positively influence the level of numerical and attitudinal saturation of officers (Rogers, 2003).

The Broader Context: Service system and community factors

A "key element" of CIT is the development of linkages between police and mental health providers in the community (National Council of State Governments, 2002). Steadman and colleagues (2001) have noted that a no-refusal drop off center at the local psychiatric emergency room key to the success of CIT in Memphis and as a core component of effective police based diversion programs generally (Steadman, et al., 2001). However, availability of services and other contextual factors have not been systematically considered or examined.

The lack of attention to the broader context in police research is not unique to studies of CIT. Klinger (2004) laments the failure to examine these factors in police studies, despite the call to do so almost 40 years ago (Reiss & Bordua, 1967). Reiss & Bordoau (1967) noted that police must regularly transact with external entities, many of which are antagonistic. They asserted, and Klinger (2004) echoes "police actions can be substantially influenced by the nature of the

tasks they are called upon to do in the environment, by the qualities of the external entities with which they must interact, and by the broader social contexts in which these interactions occur (p. 120).” In this vein, characteristics of the community police officers are working in may influence both the nature of and frequency of mental disturbance calls and the resources available to officers for responding.

Availability of Mental Health Treatment Linkages—A key outcome espoused by CIT proponents is the diversion of persons with mental illness from the criminal justice system to appropriate mental health treatment. There is extensive documentation concentrated over the past forty years or so of the often frustrating experience of police officers in accessing crisis and emergency psychiatric treatment for persons with mental illness (Bittner, 1967; Green, 1997; Teplin & Pruett, 1992) and their dissatisfaction with available options (Wells & Schafer, 2006). In order to divert individuals with mental illness to the mental health system, officers must interact with providers from the mental health system. This can only occur if responsive mental health services exist; and if officers are able to efficiently link individuals to treatment to resolve a mental health call. Police must also have access to community mental health resources to respond to individuals who are in need of services but do not meet criteria for emergency evaluation at the hospital. Availability of mental health linkages can be conceptualized concretely in terms of the number of providers of different types of services (centralized drop off, mobile crisis units, psychiatric emergency rooms, inpatient beds, outpatient providers) in a jurisdiction, or within a reasonable distance. Levels of public mental health spending in districts/communities may also be indicative of availability of mental health linkages

For officers to use mental health system resources, they would need to perceive the resources as plausible, efficient, and consistent with resolving the situation on the street (c.f. Finn & Stalans, 2002; Fry, O’Riordan, & Geanellos, 2002). Therefore, availability of psychiatric services can be conceptualized as including the perception, by officers, of the usefulness linking someone with treatment. These perceptions can be shaped by prior experience with the linkages, training in using them, the proximity of the treatment facility, and the perceived effectiveness of available treatment. Officers who experience treatment facilities as contentious or time consuming would be less likely to link to treatment than officers who experience treatment as collaborative and efficient. Changes in these perceptions can be expected over time as they relate to training, such as that given as part of CIT. It can also be attributed to knowledge of others’ experiences of linking to treatment resources, which can be connected to the extent of implementation of an intervention such as CIT. Thus, treatment linkage availability and officer perceptions of linkage availability are important constructs in our model (See figure 1).

Community Characteristics—In addition to the availability of mental health system resources, the broader social context in which police interact with persons with mental illness is likely to influence what police are expected to respond to and the resources available to for doing so. Here, we consider community conditions that are indicators of social disorganization. Police officers’ orientations toward citizens in general and their responses to crime and deviance vary based on characteristics of the neighborhood in which they work (Klinger, 1997; Smith, 1987). Neighborhood structural conditions such as poverty, wealth, family structure, employment, residential stability, housing stock, and racial/ethnic composition at the neighborhood level (Sampson & Groves, 1989; Sampson & Lauritsen, 1994; Silver, 2000) have long been considered important determinants of crime and violence (Sampson, 1985, 1990; Sampson & Groves, 1989; Shaw & McKay, 1931, 1942, 1969); violence among persons with mental illness (Silver, 2000); victimization (Sampson, 1983; Sampson & Lauritsen, 1994); police-community relations (Alpert & Dunham, 1988; Klinger, 1997; Weitzer, 1999; Weitzer & Tuch, 1999); police behavior (Smith, 1987); citizen compliance with police requests

(McCluskey, 2002), and outcomes for persons with mental illness (Faris & Dunham, 1939). Hence, officers working in different neighborhoods have very different work experiences shaping their attitudes and behavior. Social disorganization theory provides an explanation for how neighborhood-level factors exert their influence. These factors reflect structural conditions that affect the community's ability to realize the common values of its residents and to maintain effective social control (Bursik, 1988; Sampson, 1988; Silver, 2000).

This logic can be extended to include the value of, and access to mental health treatment. Access to treatment is facilitated by social networks and community ties (Hohmann, 1999; Pescosolido, 1992; Pescosolido, Gardner, & Lubell, 1998; Wells, Sherbourne, Sturm, Young, & Burnam, 2002). These social networks and ties may be more efficient toward this goal in socially organized neighborhoods. In disorganized neighborhoods, residents tend to have fewer ties to formal and informal social networks (e.g. church groups, friendship and kinship networks) that socialize community residents and are a mechanism of influence to promote public order (Bursik & Grasmick, 1993; Sampson & Groves, 1989). Individuals are less able to intervene informally with individuals exhibiting deviance such as overt symptoms of mental illness. As a result, intervention is delayed and such situations may be more likely to escalate to crisis requiring police response. Thus, officers working in disorganized neighborhoods may have more contacts with persons with mental illness experiencing crisis due to lack of earlier intervention. Responding to these situations can be dangerous and stressful for officers. Additionally, as neighborhood deviance increases, police become more cynical, losing faith in the "system" and the utility of vigorous action (Klinger, 1997). This may make them prone to relying on stereotypes about persons with mental illness, less inclined to provide assistance, and less optimistic that an intervention such as CIT could improve their ability (and the systems') to effectively respond.

The effect of CIT programs may vary across geographic areas due to variation in community conditions. In this regard, we consider two possibilities. It is possible that CIT interventions will be maximized in disorganized neighborhoods given that these neighborhoods possess more openings for formal intervention due to fewer informal avenues. Likewise, in more organized communities the effect of CIT interventions may not be as pronounced simply because there is less need for formal intervention. Alternatively, it is possible that CIT interventions are maximized in these neighborhoods. This might occur because some degree of social organization is required for CIT interventions to be effectively implemented.

Optimal saturation levels may be different in communities that are more or less disorganized. For example, in communities with higher crime rates and fewer resources, saturation levels may need to be higher to ensure that not only is there a CIT officer on duty, but that there is a CIT officer available (not involved in other calls) to respond.

Conceptual Model

In considering the complexities of police work and the implementation of a police based intervention such as CIT, one might conceptualize the effectiveness as illustrated in figure 1.

In this model, the effectiveness of CIT is assessed by a variety of outcomes. Relying only on outcomes documented in official records may limit us to high intensity but relatively low frequency events such as arrest, use of lethal force and serious injury. Determining the meaning of a reduction from 9 to 7 police shootings from one year to the next may be difficult. Thus, our model includes additional outcomes and data sources relevant to determining CIT effectiveness. One outcome is the use of specific skills when responding to calls involving persons with mental illness. These may include assessing for the likely presence of mental illness, using communication and de-escalation techniques, communicating with mental health providers and completing emergency evaluation petitions. If officers employ these skills, the

resistance/violence on behalf of the person with mental illness and the need for force by the officer and resulting injuries to all parties should be reduced. Police officers and, potentially, the subjects of the encounter can rate these outcomes. While arrests and transports to the hospital are likely to be documented, said documentation may or may not also include information identifying the call as a mental disturbance call. Thus, triangulating official documentation with officer reports may be useful. In theory, when individuals are in need of services but do not meet emergency hospitalization criteria, CIT officers will provide referrals and linkages to appropriate community services and supports. This is an important outcome that is unlikely to be captured current reporting systems, but could be obtained directly from officers.

The impact of CIT on these outcomes is moderated by the availability of mental health treatment linkages in the community. If appropriate mental health treatment linkages are not (or are perceived as not) available, the application of CIT skills may seem futile to officers. Incorporated into the model are two organizational factors: saturation (numerical and attitudinal) and the presence of a “champion”. What level of these factors is necessary for a true shift in police practice? Does this vary based on the availability of services and community conditions? The box for Community Characteristics includes the broader context in which police interact with persons with mental illness. Specifically, this includes characteristics of the community in which police officers work (indicators of social disorganization and crime rates), which may shape the availability of psychiatric services as well as police practice more generally. The overall model is controlled by baseline characteristics of the officers.

Implications for Research and Practice

Our model directs us to consider the extent to which CIT is embraced and supported by the agency, as well as mental health system and community factors that may influence both implementation and outcomes. It suggests measurable constructs at the individual officer, organizational and community level. By applying this model we will begin to build our understanding of CIT implementation and effectiveness, and determine which components of CIT, as well as organizational and community factors are important to predicting which outcomes. We may find that the primary influence on arrests of persons with mental illness is the availability of and ease of linkage to mental health resources. Reduction of injuries and increased voluntary transports to the hospital my result from an interaction between training and treatment availability/ease of linkage (see figure 1). This type of information is critical for targeting resources to local policy and resource contexts.

Some jurisdictions are going against the CIT tide and adopting different approaches or significantly modified versions of CIT. For example, many jurisdictions have enhanced training in mental health issues for all officers and some have done this in addition to the use of mental health system based mobile response units or police –mental health co-response teams (Reuland & Cheney, 2005; Rueland, 2004). Portland, Oregon implemented CIT in 1994. More recently, they have made plans to adapt the model and provide CIT training to all officers based on the belief that all officers need to be prepared to effectively respond to persons with mental illness. Major Sam Cochran has criticized this approach, suggesting that “some officers are not well suited to be CIT officers” and stressing the importance of having the right officers designated to respond to mental health crisis calls (Bernstein, 2006). It is likely that effective police response to persons with mental illness will depend on more than whether a specialized group or all officers receive training. More research is needed before rival approaches are dismissed as not following the practice “model.” Our proposed conceptual model allows for consideration of varied approaches and contexts and can guide research that examines effectiveness of competing practice models.

Key research implications for our proposed conceptual model are sampling and unit of analysis. Mental health programs are customarily researched using an individual consumer/client level of analysis. Typically, this research follows clients of a service over time to look for changes in outcome. In the case of CIT, this may be appropriate to assess outcomes such as changes or differences in risk of injury in the context of police encounters. However, this will only capture one, limited aspect of the impact of CIT.

The essence of CIT is as a systemic intervention, not an individual intervention. Future research on effectiveness of CIT needs to look for impact on populations at risk and on change in systemic behavior not only in police systems as our model suggests, but in the mental health and substance use systems as well. To reflect this, research could be designed so that individual consumer level data, to have value in this outcome conceptualization, be collected to represent populations at risk of arrest, not “clients” of a diversion program. For example, if the unit of analysis were higher order units, such as police precincts, divisions or jurisdictions, this model may support more systems change oriented analysis. Data could include repeated population surveys of individuals in the geographic area who have a greater risk of arrest or police encounter, such as those with mental illness and co-occuring substance abuse disorder, or previous arrest history. Change in the outcome could be measured over time within one system as CIT is implemented, or in controlled and naturalistic comparisons of these units. Admittedly, such research would require extensive resources. However, it would allow us to gain a deeper understanding of the impact of CIT programs in the complex, multi-system environments in which they operate.

Conclusion

Law enforcement agencies find the CIT program model appealing, which contributes to its relatively fast dissemination. While there are state and national efforts to identify key elements of CIT and support CIT programs, we lack a solid evidence base for CIT or other interventions to improve police intervention with mental illness. In this article, we presented a multi-level conceptualization of police based interventions for interactions with persons with mental illness. This model expands beyond the common focus of the impact of training to explain important outcomes, such as injury, use of force, violence, arrest and linkage to treatment, and connect these outcomes to the implementation of CIT and other models of police response.

The current research supports CIT as a promising approach to improving police response to persons with mental illness. By moving our conceptualizations and research in this area to new levels of specificity, we may contribute more to the effectiveness of these interventions. This in turn can drive policy and practice towards more effective law enforcement response to persons with mental illness. Our proposed model should also encourage innovation in mental health systems as well. We expect that accessibility, responsiveness, and quality of treatment in the mental health system may explain a great deal about the effectiveness of police interventions in a community context.

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References

Alpert, G.; Dunham, R. Policing Urban America. Vol. 1. Prospect Heights, IL: Waveland Press; 1988.

Bernstein M. Potter wants $500,000 to train police to deal with mentally ill. The Oregonian. 2006 October 31, 2006;

Bittner E. The police on skid-row: A study of peace keeping. American Sociological Review 1967;32:699–715.

Bittner, E. The functions of police in modern society. Washington, DC: U.S. Government Printing Office; 1970.

Borum R, Deane M, Steadman H, Morrissey J. Police perspectives on responding to mentally ill people in crisis: Perceptions of program effectiveness. Behavioral Sciences & the Law 1998;16:393–405. [PubMed: 9924765]

Bureau of Justice Assistance. Law Enforcement/Mental Health Partnership Program. 2006. Retrieved December 22, 2006, from http://www.ojp.usdoj.gov/BJA/grant/LE_MHPartnership.pdf

Bursik R. Social disorganization and theories of crime and delinquency: Problems and prospects. Criminology 1988;26:519–551.

Bursik, R.; Grasmick, H. Neighborhoods and crime: The dimensions of effective community control. New York: Lexington; 1993.

Chappell A, MacDonald J, Manz P. The organizational determinants of police arrest decisions. Crime & Delinquency 2006;52(2):287–307.

Cochran, S. In my opinion: Fighting stigma in law enforcement: The message has to come from the heart. ADS Center memorandum. 2004 Winter. Retrieved February 22, 2007, from http://www.adscenter.org/memoranda/indexwinter2004.htm

Cochran S, Deane M, Borum R. Improving police response to mentally ill people. Psychiatric Services 2000;51:1315–1316. [PubMed: 11013336]

Compton M, Esterberg M, McGee R, Kotwicki R, Oliva J. Crisis intervention team training: Changes in knowledge, attitudes, and stigma related to schizophrenia. Psychiatric Services 2006;57(8):1199–1202. [PubMed: 16870973]

Cordner, G. Office of Community Oriented Policing Series, U.S. Department of Justice. People with mental illness. Problems-Specific Guides Series. 2006. Retrieved October 17, 2006, from http://www.popcenter.org/problems/PDFs/MentalIllness.pdf

Crank, J. Understanding police culture. Cincinnati, Ohio: Anderson; 1998.

Deane M, Steadman H, Borum R, Veysey B, Morrissey J. Emerging partnerships between mental health and law enforcement. Psychiatric Services 1999;50(1):99–101. [PubMed: 9890588]

Draine J, Solomon P. Describing and evaluating jail diversion services for persons with serious mental illness. Psychiatric Services 1999;50(1):56–61. [PubMed: 9890580]

Engel R, Silver E. Policing mentally disordered suspects: A reexamination of the criminalization hypothesis. Criminology 2001;39(2):225–252.

Engel R, Sobol J, Worden R. Further exploration of the demeanor hypothesis: The interaction effects of suspects' characteristics and demeanor on police behavior. Justice Quarterly 2000;17(2):235–258.

Faris, R.; Dunham, H. Mental disorders in urban areas: An ecological study of schizophrenia and other psychoses. Chicago: University of Chicago Press; 1939.

Finn M, Stalans L. Police handling of the mentally ill in domestic violence situations. Criminal Justice and Behavior. Criminal Justice and Behavior 2002;29(3):278–307.

Fischer, C. America calling: A social history of the telephone to 1940. Berkeley: University of California Press; 1992.

Fry A, O'Riordan D, Geanellos R. Social control agents or front-line carers for people with mental health problems: police and mental health services in Sydney, Australia. Health & Social Care in the Community 2002;10(4):277–287. [PubMed: 12193172]

Goldstein, H. Policing a free society. Cambridge, Mass: Ballinger Publishing Company; 1976.

Green T. Police as frontline mental health workers: The decision to arrest or refer to mental health agencies. International Journal of Law & Psychiatry 1997;20(4):469–486. [PubMed: 9436056]

Hohmann A. A contextual model for clinical mental health effectiveness research. Mental Health Services Research 1999;1(2):83–91.

Kaminski R, DiGiovanni C, Downs R. The use of force between the police and persons with impaired judgment. Police Quarterly 2004;7(3):311–338.

Klinger D. Negotiating order in patrol work: An ecological theory of police response to deviance. Criminology 1997;35(2):277.

Klinger D. Environment and organization: Reviving a perspective on the police. Annals of the American Academy of Political and Social Science 2004;593:119–136.

Lurigio A, Skogan W. Winning the hearts and minds of police officers: An assessment of staff perceptions of community policing in Chicago. Crime & Delinquency, Special Issue: Community Policing 1994;40(3):315–330.

McCluskey, J. Coercion, procedural justice, and compliance in police-citizen encounters. Albany, NY: 2002. Unpublished manuscript

National Council of State Governments. Criminal Justice Mental Health Consensus Project. 2002. http://consensusproject.org/

Nowicki, D. Are our officers being sent mixed messages?. Vol. September 30. New York: Law Enforcement News; 1997.

Nowicki, D. Mixed messages. In: Alpert, G.; Piquero, A., editors. Community policing: Contemporary readings. Vol. 2. Long Grove, Illinois: Waveland Press; 2000.

Pescosolido B. Beyond rational choice: The social dynamics of how people seek help. American Journal of Sociology 1992;97:1096–1138.

Pescosolido B, Gardner C, Lubell K. How people get into mental health services: Stories of choice, coercion and "muddling through" from "first-timers". Social Science & Medicine 1998;46(2):275–286. [PubMed: 9447648]

Reiss, A.; Bordua, D. Environment and organization: A perspective on the police. In: Bordua, D., editor. The police: Six sociological essays. New York: Wiley; 1967.

Reuland, M.; Cheney, J. Enhancing success of police-based diversion programs for people with mental illness. New York: GAINS Technical Assistance and Policy Analysis Center for Jail Diversion; 2005.

Rogers, E. Diffusion of innovations. Vol. 5. New York: The Free Press; 2003.

Rueland, M. A guide to implementing police-based diversion programs for people with mental illness. Delmar, NY: Technical Assistance and Policy Analysis Center for Jail Diversion; 2004.

Ruiz J. An interactive analysis between uniformed law enforcement officers and the mentally ill. American Journal of Police 1993;12(4):149–177.

Ruiz J, Miller C. An exploratory study of Pennsylvania police officers' perceptions of dangerousness and their ability to manage persons with mental illness. Police Quarterly 2004;7(3):359–371.

Sampson R. Structural density and criminal victimization. Criminology 1983;21:276–293.

Sampson R. Neighborhood and crime: The structural determinants of personal victimization. Journal of Research in Crime and Delinquency 1985;22:7–40.

Sampson R. Local friendship ties and community attachment in mass society: A multilevel systemic model. American Sociological Review 1988;53:766–779.

Sampson R. Crime and deviance over the life course: The salience of adult social bonds. American Sociological Review 1990;53:766–769.

Sampson R, Groves W. Community structure and crime: Testing social-disorganization theory. American Journal of Sociology 1989;94:774–802.

Sampson, R.; Lauritsen, J. Violent victimization and offending: Individual-, situational-, and community-level risk factors. In: Reiss, A.; Roth, A., et al., editors. Understanding and preventing violence. Vol. 3. Chicago: University of Chicago; 1994. p. 1-114.

Shaw, C.; McKay, H. Report on the Causes of Crime, National Commission of Law Observance and Enforcement. Vol. 2. Washington, DC: Government Printing Office; 1931. Social factors in juvenile delinquency.

Shaw, C.; McKay, H. Juvenile delinquency and urban areas. Chicago: University of Chicago Press; 1942.

Shaw, C.; McKay, H. Juvenile delinquency and urban areas. Vol. Rev ed.. Chicago: University of Chicago Press; 1969.

Silver E. Race, neighborhood disadvantage, and violence among persons with mental disorders: The importance of contextual measurement. Law & Human Behavior 2000;24(4):449–456. [PubMed: 10974802]

Smith D. Police response to interpersonal violence: Defining the parameters of legal control. Social Forces 1987;65:767–782.

Spaite, P.; Davis, M. The mentally ill and criminal justice system: A review of programs. 2005. Retrieved October 18, 2006, from http://www.namiohio.org/REVIEW_PROGRAMS.pdf

Steadman H, Deane M, Borum R, Morrissey J. Comparing outcomes of major models of police responses to mental health emergencies. Psychiatric Services 2000;51(5):645–649. [PubMed: 10783184]

Steadman H, Stainbrook K, Griffin P, Draine J, Dupont R, Horey C. The need for a specialized crisis response location for effective police-based diversion programs. Psychiatric Services 2001;52:219–222. [PubMed: 11157122]

Strauss G, Glenn M, Reddi P, Afaq I, Podolskaya A, Rybakova T, Saeed O, Shah V, Singh B, Skinner A, El-Mallakh R. Psychiatric disposition of patients brought in by crisis intervention team police officers. Community Mental Health Journal 2005;41(2):223–228. [PubMed: 15974500]

Teller J, Munetz M, Gil K, Ritter C. Crisis intervention team training for police officers responding to mental disturbance calls. Psychiatric Services 2006;57(2):232–237. [PubMed: 16452701]

Teplin L. Criminalizing mental disorder: The comparative arrest rate of the mentally ill. American Psychologist 1984;39(7):794–803. [PubMed: 6465666]

Teplin L, Pruett N. Police as streetcorner psychiatrist: Managing the mentally ill. International Journal of Law & Psychiatry 1992;15:139–156. [PubMed: 1587650]

Terrill W, Reisig M. Neighborhood context and police use of force. Journal of Research in Crime and Delinquency 2003;40(3):291–321.

Thompson L, Borum R. Crisis Intervention Teams (CIT): Considerations for knowledge transfer. Law Enforcement Executive Forum 2006;6(3):25–36.

Trojanowicz, R.; Bucqueroux, B. Community policing: A contemporary perspective. Cincinnati: Anderson; 1990.

Watson A, Angell B. Applying procedural justice theory to law enforcement's response to persons with mental illness. Psychiatric Services. in press

Watson A, Corrigan P, Ottati V. Police officer attitudes and decisions regarding persons with mental illness. Psychiatric Services 2004a;55:49–53. [PubMed: 14699200]

Watson A, Corrigan P, Ottati V. Police responses to persons with mental illness: Does the label matter? The Journal of the American Academy of Psychiatry and the Law 2004b;32(4):378–386. [PubMed: 15704622]

Weitzer R. Citizens' perceptions of police misconduct: Race and neighborhood context. Justice Quarterly 1999;16(4):819–846.

Weitzer R, Tuch S. Race, class, and perceptions of discrimination by the police. Crime & Delinquency 1999;45(4):494–507.

Wells K, Sherbourne C, Sturm R, Young A, Burnam M. Alcohol, drug abuse, and mental health care for uninsured and insured adults. Health Services Research 2002;37(4):1055. [PubMed: 12236383]

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

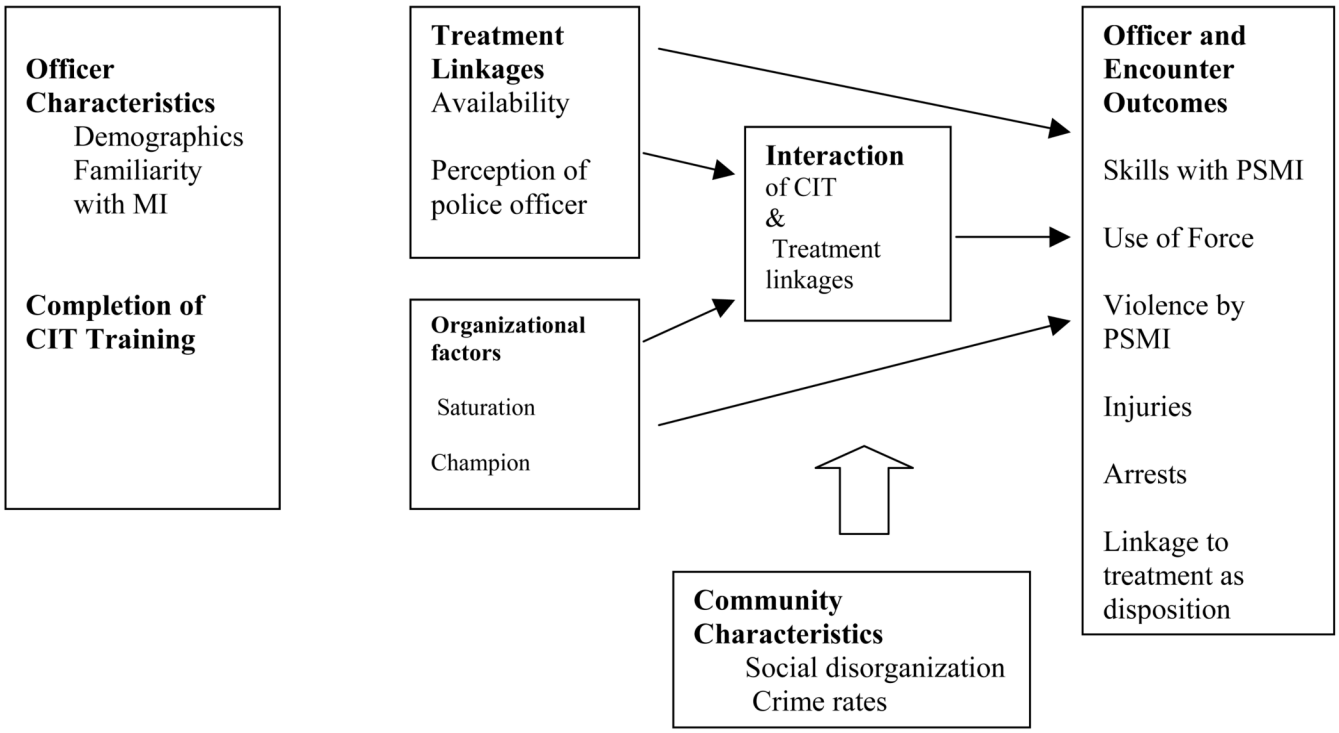

Figure 1.
Effectiveness of CIT