

Specialized Police-Based Mental Health Crisis Response: The First 10 Years of Colorado's Crisis Intervention Team Implementation

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Objective: This study examined the implementation of crisis intervention teams by law enforcement agencies in Colorado.

Methods: Rates of Special Weapons and Tactics (SWAT) use, arrests, use of force, and injuries were assessed during 6,353 incidents involving individuals experiencing a mental health crisis. Relationships among original complaint, psychiatric illness, substance abuse, violence risk, and disposition of crisis calls were analyzed.

Results: Rates of SWAT use (<1%), injuries (<1%), arrests (<5%), and use of force (<5%) were low. The relative risk of

transfer to treatment (versus no transfer) was significantly higher for incidents involving psychiatric illness, suicide threat or attempt, weapons, substance abuse, and violence potential.

Conclusions: Use of force or SWAT, arrests, and injuries were infrequent. Suicide risk, psychiatric illness and substance abuse, even in the presence of a weapon or violence threat, increased the odds of transfer to treatment, whereas suicide risk lowered the odds of transfer to jail.

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Police use of force and injuries may occur at increased rates during interactions between police and people with mental illness (1), although perception of a mental illness by officers may not predict fatal police shootings (2). Over the past three decades, the Memphis crisis intervention team (CIT) model (3–5), mobile crisis teams, and specialized programs such as Mental Health First Aid (6) have emphasized de-escalation skills and mental health literacy to increase diversion to psychiatric treatment.

Colorado has broad regional differences in access to mental health care and only 16.9 psychiatric beds per 100,000 population. Police are often the first point of contact for persons during a mental health crisis (1,7,8). In 2002, the Colorado Division of Criminal Justice established a standardized statewide CIT program with the goals of increasing diversion to treatment and reducing unnecessary arrests, injuries, use of force, and Special Weapons and Tactics (SWAT) callouts by increasing officers' knowledge of mental illness, developing verbal crisis de-escalation skills, and improving awareness of local mental health resources. Colorado's CIT program is regionalized; each region has a steering committee comprising cross-system stakeholders who collaboratively plan and implement their programs geared to local needs and resources. These include

implementing Colorado's standardized 40-hour CIT training curriculum; developing call-taker and dispatcher protocols; establishing procedures for stabilization, observation, and disposition of crisis calls; streamlining transportation and custodial transfer; and providing for program evaluation. Strong partnerships with stakeholder groups such as community mental health centers, local mental health care providers, hospitals, and advocacy organizations have led to the development of outgrowth programs such as postcrisis case management, community re-entry case management in county jails, and specialty problem-solving courts for criminal cases with a mental health nexus. To ensure program fidelity, experienced CIT course directors serve as instructor-trainers for course directors in new regions. Course content is delivered by local mental health professionals and other subject matter experts (9).

This study tested whether CIT-trained officers would be more likely to transfer a person experiencing a mental illness crisis to jail or to a psychiatric facility for treatment if that person shows violence potential, such as wielding a lethal weapon. The study identified factors associated with the disposition of crisis calls, comparing the likelihood of transfer to treatment, jail, or home versus no transfer required for each factor, and reported prevalence of injuries,

TABLE 1. Association of factors related to incidents involving individuals who were the subject of a crisis call and disposition of the call

Factor	Home/other ^a			Medical/psychiatric			Jail		
	Exp (β) ^b	95% CI	p	Exp (β) ^b	95% CI	p	Exp (β) ^b	95% CI	p
Suicide ^c	.46	.20–1.09	.08	2.18	1.92–2.48	<.001	.69	.48–.98	.04
Mental illness ^d	1.14	.44–2.94	.79	2.54	2.12–3.03	<.001	.90	.60–1.36	.63
Violence ^e	.54	.21–1.43	.22	1.22	1.06–1.41	.006	3.46	2.55–4.69	<.001
Weapon ^f	1.20	.49–2.96	.69	1.78	1.57–2.02	<.001	1.41	1.00–1.97	.05
Drugs or alcohol ^g	.54	.22–1.30	.17	1.50	1.34–1.68	<.001	1.65	1.22–2.23	.001

^a Incident was resolved at home, or subject of call was transferred to home

^b Relative risk ratio for comparison with base outcome of "no transfer required." Overall model: $\chi^2=821.1$, $df=15$, $p\leq.001$

^c Threats, attempts, any suicide risk, or original complaint

^d Family or officer judgment, any psychiatric illness, original complaint, or mental health hold

^e Threatened self or others, threatened police, original complaint of assault, excluding domestic violence, which by Colorado law requires arrest

^f Includes edged weapon, overdose, firearm, asphyxiation, motor vehicle, jumper, "suicide by cop," and any or more than one weapon

^g On the basis of officer judgment

SWAT callouts, use of force, and arrests during the first decade (April 2002 to November 2011) of Colorado's state-wide CIT initiative.

METHODS

The Office of Research and Statistics of the Division of Criminal Justice developed the CIT Data Collection Form (CIT-DCF), a two-page questionnaire that collects descriptive, demographic, and outcomes data on police responses to mental health crisis calls. The state encouraged but did not require officers to complete the CIT-DCF. Officers completed the CIT-DCF after calls that were classified as a "CIT call" on the basis of the perceived mental state of the subject of the call and the officers' use of crisis de-escalation skills; completed forms were submitted to the Office of Research and Statistics. The number of CIT-trained officers increased yearly, reaching nearly 7,000 certified officers from 70 law enforcement agencies by 2012.

Items from the CIT-DCF were binary coded (present/absent) after removing officer and participant personal identifiers. Anonymous and aggregate analysis and reporting of data complied with applicable federal, state, and local legal requirements. Statistical analyses used commercial software (Stata, version 12). Relationships of selected factors to outcomes were modeled with multinomial logistic regression. Coefficients are reported as relative risk ratios and their 95% confidence intervals.

RESULTS

A total of 1,167 out of 7,000 (16.7%) CIT-trained officers completed 6,355 CIT-DCF forms on 23.3 ± 26.6 (range 1–128) calls per officer. Over 95% of subjects ($N=5,762$) of calls were involved in three or fewer incidents during the study years (2002–2011). Data on the total number of mental health-related crisis calls in participating jurisdictions were not available. [Original complaint and disposition of calls and participating law

enforcement agencies are reported in an online supplement to this report.]

Because two individuals died by suicide at the scene, only 6,353 incidents could be analyzed for disposition. Age, sex and ethnicity were omitted on some incident reports. Incidents involved men in 3,331 ($N=6,326$, 52.7%) cases and women in 2,995 ($N=6,326$, 47.3%). Most ($N=4,832$ of 6,189, 78.1%) involved adults (age ≥ 18 years) [see figure in supplement]. Ethnic distribution ($N=6,181$) was ranked as follows: Cau-

casian ($N=4,951$, 80.1%), Hispanic ($N=626$, 10.1%), African American ($N=446$, 7.2%), Asian ($N=77$, 1.25%), mixed race ($N=45$, 73%), and Native American ($N=36$, .58%). In most incidents ($N=3,964$, 62.4%), at least one psychiatric diagnosis was reported. Alcohol or drug abuse was prevalent ($N=2,226$, 38.6%) [see online supplement].

Among 6,353 crisis calls, most ($N=3,623$, 57.0%) were for suicide risk, including threats ($N=2,536$, 39.9%) and attempts ($N=1,092$, 17.2%). Calls involved threats of violence to others in 16.2% ($N=1,027$). Force was required in 5.0% ($N=317$), and SWAT was called out in .82% ($N=52$) of incidents. Injuries occurred in 824 out of 6,353 (13.0%) incidents, mostly ($N=797$, 12.6%) prior to police contact. Over 95% ($N=6,043$) did not result in arrest, and a majority involved transport to a treatment facility ($N=3,225$, 50.8%; $N=2,575$, 40.5% with a 72-hour mental health hold).

The relative risk of being transported to a clinical facility (versus no transfer required) was 2.54 for those with a psychiatric diagnosis, 2.18 for those at risk of suicide, 1.78 for those with a weapon, 1.50 for those who reported abuse of drugs or alcohol, and 1.22 for those who presented a threat of violence. The risk of being transported (versus no transfer) to jail was 3.46 for those with a threat of violence, 1.65 for those with reported abuse of drugs or alcohol, 1.41 for those with a weapon, and .69 for those at risk of suicide (Table 1).

DISCUSSION

This is the first report of systematic assessment of a state-wide post-CIT experience. Incidents involving individuals in crisis who had a psychiatric illness, threatened or attempted suicide, abused substances, threatened violence, or had a weapon were more likely to be diverted to treatment, whereas violence threat, presence of a lethal weapon and substance use increased, and suicide threat decreased, the likelihood of transfer to jail. These findings accord with previous, relevant research (4,10–14). This study found that officers' perceptions of alcohol or drug abuse by the

individual was associated with decisions to transfer to either treatment or jail, whereas suicide risk and presence of a psychiatric illness apparently influenced the decision to transfer to clinical treatment, and threat of violence led to transfer to jail. Most of the incidents analyzed involved adults, but a striking 22% (N=1,357) involved juveniles under age 18, including 18 of 29 (62.1%) with a legal disposition that was resolved at a Juvenile Assessment Center. Most crises involving persons over age 60 (5% of the total) were resolved at home or by transfer to a hospital.

Study limitations included lack of comparable pre- or non-CIT data, the absence of data on total number of “mental health calls” from which study incidents were sampled, and the low rate of participation by trained officers (17%), which significantly limited the generalizability of findings. Strengths included fidelity of Colorado’s CIT program to the Memphis model and broad sampling across the entire state over several years.

CONCLUSIONS

Despite significant limitations, this study of Colorado’s CIT implementation showed encouraging results for diversion to treatment by trained officers handling mental health–related crisis calls, even in the presence of lethal weapons, and showed promise for the nonviolent resolution of crisis calls.

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REFERENCES

- Hails J, Borum R: Police training and specialized approaches to respond to people with mental illnesses. *Crime and Delinquency* 49:52–61, 2003
- Shane JM, Lawton B, Swenson Z: The prevalence of fatal police shootings by US police, 2015–2016: patterns and answers from a new dataset. *Journal of Criminal Justice*, in press
- Compton MT, Bahora M, Watson AC, et al: A comprehensive review of extant research on Crisis Intervention Team (CIT) programs. *Journal of the American Academy of Psychiatry and the Law* 36:47–55, 2008
- Watson AC, Fulambarker AJ: The crisis intervention team model of police response to mental health crises: a primer for mental health practitioners. *Best Practices in Mental Health* 8:71–81, 2012
- Lamb HR, Weinberger LE, DeCuir WJ Jr: The police and mental health. *Psychiatric Services* 53:1266–1271, 2002
- Hadlaczky G, Hökby S, Mkrtchian A, et al: Mental Health First Aid is an effective public health intervention for improving knowledge, attitudes, and behaviour: a meta-analysis. *International Review of Psychiatry* 26:467–475, 2014
- Tondo L, Albert MJ, Baldessarini RJ: Suicide rates in relation to health care access in the United States: an ecological study. *Journal of Clinical Psychiatry* 67:517–523, 2006
- Torrey EF, Entsminger K, Geller J, et al: *The Shortage of Public Hospital Beds for Mentally Ill Persons*. Arlington, VA, Treatment Advocacy Center, 2008
- Sayre S, Brodie J: *CIT 40-Hour Core Curriculum*. Lakewood, Colorado Regional Community Policing Institute, Colorado Department of Public Safety, 2010
- Watson AC, Ottati VC, Draine J, et al: CIT in context: the impact of mental health resource availability and district saturation on call dispositions. *International Journal of Law and Psychiatry* 34: 287–294, 2011
- Schwarzfeld M, Reuland M, Plotkin M: *Improving Responses to People With Mental Illnesses: The Essential Elements of a Specialized Law Enforcement–Based Program*. New York, Council of State Governments Justice Center, 2008
- Ritter C, Teller JLS, Marcussen K, et al: Crisis intervention team officer dispatch, assessment, and disposition: interactions with individuals with severe mental illness. *International Journal of Law and Psychiatry* 34:30–38, 2011
- Compton MT, Bakeman R, Broussard B, et al: The police-based crisis intervention team (CIT) model: II. effects on level of force and resolution, referral, and arrest. *Psychiatric Services* 65:523–529, 2014
- Teller JL, Munetz MR, Gil KM, et al: Crisis intervention team training for police officers responding to mental disturbance calls. *Psychiatric Services* 57:232–237, 2006