Objective: This study tested a hypothesized inverse correlation between the number of crisis intervention team (CIT) officers and the number of Special Weapons and Tactics (SWAT) callouts in an urban police department. Methods: Data for the number of accrued CIT-trained officers were combined with administrative data on the number of SWAT callouts during 27 four-month intervals. Results: There were no significant correlations for the relationships examined, and implementation of CIT training was not associated with a decrease in SWAT callouts. Conclusions: Although the CIT model may yield important benefits in other domains, this study found no evidence of declining SWAT utilization as the number of CIT-trained officers accrued. The absence of association is likely due to the relatively low prevalence of SWAT use and the very different nature of CIT versus SWAT responses. (Psychiatric Services 60:831–833, 2009)

The crisis intervention team (CIT) model is a specialized police-based program intended to enhance officers’ interactions with individuals with mental illnesses, improve the safety of all persons involved in a police intervention, and encourage service reforms pertaining to the complex interfaces between law enforcement and mental health. The most widely recognized crisis intervention model for police officers was established in 1988 in Memphis, Tennessee. In this program, officers receive specialized CIT training from mental health professionals, family advocates, and mental health consumer groups to prepare them to intervene more effectively in crises (1–3). In addition to the training curriculum for officers, other core elements of the model relate to partnerships between law enforcement, advocacy, and mental health; community ownership; training of dispatchers; the structure and policies of mental health emergency–receiving facilities; and outreach to other communities (4).

The CIT model is considered by many to be the most promising partnership between law enforcement and mental health and has been implemented in numerous cities and counties and through several statewide initiatives (2,5). In 2007 the Bureau of Justice Assistance estimated that more than 400 CIT programs were operating in the United States (6). Despite the rapid implementation, few reports of empirical research on CIT are available, including such research a high priority (3). Special Weapons and Tactics (SWAT) teams are tactical units trained to perform exceptionally dangerous, high-risk, and counterterrorism operations outside the operations covered by routine training of patrol officers. SWAT teams, which may use specialized firearms and equipment, were initially intended to minimize police casualties by responding to and managing critical situations involving shootings. Dupont and Cochran (1), who were instrumental in developing the Memphis CIT model in 1988 and who have been involved in its dissemination since, indicated that CIT implementation may be associated with decreased use of high-intensity police units, such as SWAT teams; with lower rates of officer injuries; and with increased referrals of individuals with mental illnesses to treatment facilities. After implementation of the CIT program in Memphis, injuries to individuals with mental illnesses caused by police decreased by nearly 40%, and the rate of Tactics Apprehension and Containment Team (similar to SWAT) callouts in Memphis decreased by nearly 50% (1,7). Aside from these preliminary findings in Memphis, no other studies have examined associations between CIT and SWAT callouts.

Given the lack of empirical data on the ways in which CIT training of police officers may affect utilization of SWAT teams, this study evaluated potential correlations between the accrued number of CIT-trained officers...
and the number of SWAT callouts in a large, urban police department. We hypothesized that there would be an inverse correlation, indicating that as the number of CIT-trained officers increased, the number (and rate per 100,000 annual population) of SWAT callouts would decline.

**Methods**
Administrative data detailing the dates and nature of SWAT callouts during 1999–2007 were provided by the Atlanta Police Department. Data on the number of CIT-trained officers in the department were obtained from the state’s CIT program (2). The study was presented to the university’s institutional review board (IRB), which determined that it did not require further IRB review because the study did not meet the definition of research involving human subjects or of clinical investigation as set forth in the university’s policies and federal rules. Specifically, the investigative team worked only with administrative data that had been stripped of identifying information.

Because of the relatively small SWAT callout volume—72 calls in nine years—the number of callouts and the accrued number of CIT-trained officers were determined for 27 four-month intervals from January 1999 through December 2007. This use of four-month intervals allowed for a sufficient number of data points for correlation analysis, took into account the gradual accrual of CIT-trained officers, and made the analysis and interpretation straightforward.

Because CIT training within the Atlanta Police Department began in December 2004, ten of the 27 four-month intervals included accruing numbers of CIT-trained officers.

Reasons for SWAT callouts included armed burglar or suspect; barricaded shooter, robber, or suspect; homicide suspect; hostage taker; kidnapper; person armed; robbery suspect or robbery warrant; shooting suspect; and wanted person. In addition, stated reasons for SWAT callouts that were related to psychiatric crises were armed suicide, suicide attempt, jumper, or suicide threat and “demented” person or “armed, demented” person.

Potential correlations between the accrued number of CIT-trained officers and the number of both total SWAT callouts and SWAT callouts in response to a psychiatric crisis were evaluated with Spearman correlation coefficients. The Atlanta city population grew more than 21% from 1999 to 2006, ranging from 401,726 in 1999 to 486,411 in 2006 (8,9). Therefore, we also examined SWAT callout data as rates per 100,000 population. In addition to these correlational analyses, we used independent-samples Student’s t tests to assess potential reductions in the mean rates of SWAT callouts and SWAT callouts responding to psychiatric crises before (January–April 1999 through May–August 2004) and after (September–December 2004 through September–December 2007) CIT implementation. Having SWAT callout data for six years before the implementation of CIT training allowed for more stable mean rate estimates; thus a nine-year period was studied.

**Results**
From January 1999 to December 2007, SWAT teams had 72 callouts, with 22 of these (31%) in response to psychiatric crises. The number of SWAT callouts per four-month period ranged from two to 13 (mean±SD= 7.0±3.2). The number of SWAT callouts related specifically to a psychiatric crisis ranged from zero to seven per four-month period (1.9±1.6). The rate of callouts per 100,000 annual population ranged from 4.4 to 2.8 (1.6±.7), and the rate of callouts involving psychiatric crises ranged zero to 1.5 (4±.3). Between December 2004 and December 2007, 134 Atlanta Police Department officers completed CIT training. Of note, by December 2007, this represented approximately 8.3% of the department’s sworn officers, which is less than the commonly discussed target of 20%–25% of patrol officers (4). However, CIT training in Georgia, and within the Atlanta department, is ongoing. The number of accrued officers increased relatively steadily over time during the ten four-month intervals: four officers in the first interval, then 14, 27, 58, 80, 90, 109, 109, 127, and 134 officers, respectively (thus in only one four-month interval were no additional officers trained).

There were no significant correlations between the number of CIT-trained officers and the number of total SWAT callouts or the number of SWAT callouts responding to psychiatric crises. When considering SWAT callout rates per 100,000, again we found no significant correlations between the number of CIT-trained officers and the rate of total SWAT callouts or the rate of callouts to respond to psychiatric crises. Similarly, we found no reduction in the mean rate of either total SWAT callouts or those responding to psychiatric crises in the periods before and after CIT implementation.

**Discussion**
Contrary to the hypothesis, this study did not reveal an inverse correlation between the accrued number of CIT-trained officers in an urban police department and the number or rate of total SWAT callouts or SWAT callouts responding to psychiatric crises. There were also no apparent reductions in the mean rates of SWAT callouts—total or in response to psychiatric crises—before or after CIT implementation. This lack of association may be related to the nature of the requests received by dispatchers or 911 centers regarding calls for police assistance. CIT officers are generally assigned to routine patrol duties and are available to provide crisis-related intervention while on patrol or to respond to calls identified as involving an individual with a mental illness. Contrarily, calls for assistance that result in the dispatching of SWAT teams are not routine in nature; they are urgent and potentially very dangerous. CIT and SWAT are specialized responses that address very different types of public service needs, and although SWAT teams may benefit from the presence of a CIT officer in circumstances involving an individual in psychiatric crisis, the two types of responses are generally very different.

Even though accumulating research indicates that the CIT program may be beneficial in several domains (10–13), it is not clear that CIT training will reduce the need for
SWAT. Of note, though, it has been recommended that 20%-25% of a patrol force should receive CIT training (4), and it is possible that little impact on the system will be observed until CIT officers are available in all precincts and on all shifts and are dispatched to all calls involving a person with a mental illness in crisis.

Several limitations of this study should be noted. First, other variables, some of which could confound a potential association between the number of CIT-trained officers and SWAT callouts, were not examined. Such factors could include changes in the prevailing culture within the police department, the availability of local mental health resources, and funding and structure of both law enforcement and mental health services. In addition the relatively low frequency of SWAT callouts—particularly those related to psychiatric crises—may have obfuscated subtle associations.

Second, administrative data from a single urban police department were examined, and larger studies involving multiple sites may yield different findings. Statewide data from states that coordinate CIT implementation at the state level (2,5) would be of interest in future research. Also related to the use of administrative data, the accuracy of the SWAT callout data cannot be confirmed, which is an inherent limitation of such data that are not collected for research purposes. It is possible that the data may underrepresent the actual number of SWAT callouts. In addition, other types of administrative data, which were not available for this analysis, would have been beneficial. For example, although the increase in population during the study period was controlled for by examining the rate of callouts per 100,000 population, with the relatively small number of SWAT callouts it would be of interest to examine the total SWAT callouts and SWAT callouts responding to psychiatric crises as a proportion of the total number of police responses. Reliable administrative data were also lacking on the number of CIT callouts that were made, the proportion of such callouts in which CIT-trained officers assisted, and CIT-related callouts as a proportion of the total number of police responses.

Third, CIT training had been available to the department for only approximately three years. Therefore, only ten data points were available in regard to the accrued number of CIT-trained officers. Longer follow-up periods may elucidate associations not detected in this study.

Conclusions
Further research is needed to explore the relationship between CIT and SWAT, particularly in light of the increasing number of publicized cases in which individuals with mental illnesses have either been injured or killed during SWAT interventions (14,15). Additional studies examining associations between CIT training and less intensive responses, such as patrol officers’ decisions regarding use of force during routine duties, are also needed. Furthermore, the field’s nascent understanding of potential benefits of CIT training would be expanded by studies assessing other hypothesized outcomes, including reductions in injuries to individuals with mental illnesses; reductions in injuries to officers; enhanced officers’ abilities to assist individuals in seeking treatment earlier; and increased awareness of mental illnesses by the broader community, given that the core elements of the CIT model extend to the community at large.

Acknowledgments and disclosures
The authors report no competing interests.

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