

Evaluation of Gatekeeper Training for Suicide Prevention in Veterans

Monica M. Matthieu, Wendi Cross, Alfonso R. Batres,
Charles M. Flora, and Kerry L. Knox

Clinical providers and “front line” nonclinical staff who work with veterans, families, and communities are natural gatekeepers to identify and to refer veterans at risk for suicide. A national cohort (n = 602) of community based counseling center staff from the U.S. Department of Veterans Affairs (VA) participated in an evaluation of a brief standardized gatekeeper training program and a scripted behavioral rehearsal practice session. A significant difference in knowledge and self efficacy was observed from pre to post (p < .0001) with the nonclinicians showing larger effect sizes for knowledge (0.96 vs. 0.42) and self efficacy (0.89 vs. 0.41). Gatekeeper training for suicide prevention shows promise for increasing the capacity of VA staff to work with at risk veterans.

Keywords gatekeepers, health personnel, health service, suicide, veterans

Suicide prevention has been promoted as one prevention approach to address common risk factors and associated adverse outcomes (Knox, Conwell, & Caine, 2004). However, aside from the US Air Force’s Suicide Prevention Program (AFSPP) (Knox, Litts, Talcott et al., 2003; USAF, 2001), evidence is limited on the effectiveness of integrating diverse interventions, with even less known about what combinations of prevention approaches are essential in reducing suicide (Goldsmith, Pelman, Klienman et al., 2002; Mann Apter, Bertolote et al., 2005; PHS, 1999; PHS, 2001). There is also scant information on gatekeeper skills that can be used by natural peer helpers or caregivers (Tierney, 1994; Tierney, Ramsey, Tanney et al., 1990) to identify and refer local community members, such as veterans and family members, to care. Potentially, increasing awareness of

suicide and identifying direct routes to services that can be mobilized across the life course by the concerned family or “front line” community providers may have enduring impacts (Cross, Matthieu, Cerel et al., 2007). Finally, examining gatekeeper training as one aspect of a comprehensive suicide prevention program within the national healthcare system of the Department of Veterans Affairs (VA) has yet to be studied.

METHODS

This is the first study of community gatekeeper training for suicide prevention in the VA. A pre and post test study design was used to assess the impact of the suicide prevention program. Two cohorts of VA staff, clinical providers (i.e., psychologists,

social workers, etc.) and nonclinical staff (i.e., administrative staff and community outreach workers) were initially surveyed in 2006.

The sample was drawn from a national program of 209 community based counseling centers that are organized into seven distinct geographical regions that cover all 50 states and the territories of the United States. Vet Centers are staffed by a small team usually comprised of a supervisory mental health professional, 1–2 additional clinical providers of varying professional disciplines, a community outreach technician, and an office administrator. Gatekeeper training was offered to all VA staff who works for this national program providing readjustment counseling services to veterans, families, and communities. A recruiting announcement was made by the national leadership about the study and approval was given to provide training at each of the regional employee education in-service conferences.

Reasons for nonparticipation included not attending one of the fourteen scheduled regional conferences ($n = 140$). Therefore, the sample included all employees who attended the VA employee education conference on the scheduled presentation and data collection day. One region covering the Midwestern part of the United States was selected as the pilot sample ($n = 125$) to refine the procedures and the program content; therefore, the research team excluded their data from this analysis. Of the 760 eligible and trained participants, 79.2% ($n = 602$) agreed to participate in the survey. Participants were significantly more likely than the Midwest pilot sample to report being of Latino/Hispanic ethnicity (15.0% vs. 1.8%, $p < 0.01$), Asian American (2.6% vs. 0%, $p = 0.02$) or another racial group (7.2% vs. 0.8%, $p < 0.01$). The Midwest pilot sample was significantly more likely to be African American (25.0%) than participants (15.0%) from

the other six US regions ($p = 0.01$). The highest educational level attained by the participants also differed from the pilot sample with regard to high school/GED (8.3% participants vs. 15.7% pilot sample, $p = 0.02$) and masters degrees (59.4% participants vs. 49.6% pilot sample, $p = 0.05$).

Data Collection Procedures

Prior to the presentation on suicide prevention, conference attendees were invited to participate in an evaluation of a suicide prevention program. Informed consent forms were distributed and reviewed with the entire training group. Participants completed a brief survey. Immediately after the gatekeeper training and behavioral rehearsal practice activity, participants completed a post training survey. Data were collected from March to August 2006. The data collection procedures were the same for all fourteen conferences. Ethical approval was obtained from both the Institutional Review Boards at the University of Rochester and the Syracuse VA Medical Center.

Intervention

Community Gatekeeper Training Program. A brief, standardized community gatekeeper suicide prevention training (Quinnett, 1995) was conducted by a certified QPR Institute, Inc. instructor and doctoral level social worker (MMM). All of the trainings were delivered to groups of approximately 70 attendees with the instructor presenting the same one hour multimedia training.

Behavioral Rehearsal Practice Session. Participants were also offered an opportunity to “practice gatekeeper skills” in a three-person peer group format immediately following this large group presentation. The practice opportunity was described by

the instructor as a five-to-seven minute standardized role play dialogue during which they would each use the three gatekeeper skills presented in the training. The practice tailored scenario was purposely designed to be simple, brief, and highly interactive.

Measures

Surveys were based on similar questions used in previous studies of gatekeeper training (Cross, Matthieu, Cerel et al., 2007). For this study, the pre-test survey assessed: (1) Demographics, (2) Individual level factors (e.g., history of trainings, interviewing experience, etc.), and (3) Gatekeeper Training Evaluation. Demographics included age, gender, race, ethnicity, education, job role, and years of clinical or medical practice experience. Individual level factors for this study included an assessment of the participants' lifetime history of education related to suicide/crisis and general/clinical interviewing experience. For the gatekeeper training evaluation, in addition to self-efficacy, two types of knowledge were assessed: (1) declarative knowledge, defined as information that is factual and provided in the training and (2) perceived knowledge, defined as a self assessment of ones own knowledge of the topic. These items were adapted for this study from previous gatekeeper studies (Cross, Matthieu, Cerel et al., 2007; Wyman, Brown, Inman et al., 2007).

The post-test survey reassessed self-efficacy, declarative knowledge and perceived knowledge as part of the Gatekeeper Training Evaluation. In addition, the post-test also assessed satisfaction with the training, an evaluation of the Behavioral Rehearsal Practice using a previously tested Role Play Acceptability Scale (Cross, Matthieu, Cerel et al., 2007) and the Peer Observational Checklist developed for use in this study.

Data Analysis

Data were entered into SPSS for Windows 15.0 (SPSS Inc., Chicago, Illinois, 2007). Demographic characteristics and individual level factors were estimated using cross-tabulations for the two groups: clinical and nonclinical. Pre-test surveys assessed extant perceived knowledge, self-efficacy, and declarative knowledge regarding suicide and suicide prevention; post-test surveys assessed for immediate changes in these outcome variables. The proportion of appropriate gatekeeper behaviors observed and documented at post-training was also assessed among behavioral rehearsal participants. Bivariate analyses, tests for differences in group means using paired t-tests, associated tests of significance and effect sizes using Cohen's *d* were conducted to assess the impact of gatekeeper training and behavioral rehearsal. There were missing data on some questionnaire items; therefore the sample size may differ for some variables.

RESULTS

As indicated in Table 1, a total of 602 staff participated in the study. The overall sample of VA staff had a mean age of 51.2 years, were 63.3% male, and 72.6% were Caucasian. The cohorts did not differ in ethnicity and non white racial groups. The nonclinical cohort, however, was significantly younger ($M = 43.8$; $SD \pm 11.1$) and included a significantly larger proportion of females (53.5%) than did the clinical cohort (29.7%). In terms of job roles, nearly 50% ($n = 418$) of the total sample were mental health professionals with the remainder being administrative staff (20.3%; $n = 177$), clinical supervisors (19.1%; $n = 166$); and nonclinical outreach workers (8.9%; $n = 77$).

TABLE 1. Sample Characteristics of VA Employees Attending Community Gatekeeper Training (N = 602)

Characteristic	Total sample		Clinical		Nonclinical		p
	N	%	N	%	N	%	
Mean Age (Range; SD)	51.2 (23–77; 10.5)		54.2 (25–77; 8.7)		43.8 (23–65; 11.1)		0.000
Gender							
Male	373 (63.3%)		293 (70.3%)		80 (46.5%)		0.000
White	425 (72.6%)		317 (76.4%)		108 (63.5%)		0.000
Race							
African Am.	88 (15.0%)		53 (12.8%)		35 (20.6%)		0.02
Asian	15 (2.6%)		9 (2.2%)		6 (3.5%)		0.35
Am. Indian	11 (1.9%)		8 (1.9%)		3 (1.8%)		0.90
Pacific Islander	4 (0.7%)		3 (0.7%)		1 (0.6%)		0.86
Ethnicity							
Hispanic	83 (15.0%)		54 (13.8%)		29 (18.1%)		0.32
Education							
Associates	45 (7.5%)		4 (0.9%)		41 (23.6%)		0.000
Bachelors	64 (10.6%)		22 (5.2%)		42 (24.1%)		0.000
Masters	357 (59.4%)		335 (78.5%)		22 (12.6%)		0.000
Doctorate	66 (11.0%)		63 (14.8%)		3 (1.7%)		0.000
Clinical experience							
6+ years	—		283 (81.3%)		—		—
Interviewing experience							
Sensitive questions	528 (89.2%)		414 (98.3%)		114 (66.7%)		0.000
Health related questions	486 (81.8%)		419 (98.8%)		67 (39.4%)		0.007
¹ Perceived knowledge							
Pre	2.52 (0.89)		15.90 (590)*	2.79 (.72)	11.03 (422)*	1.84 (.91)	13.00 (167)*
Post	2.95 (0.70)		0.54	3.08 (.66)	0.42	2.63 (.72)	0.96
² Self-efficacy							
Pre	2.69 (0.96)		15.81 (590)*	3.01 (.71)	11.90 (422)*	1.87 (1.03)	12.11 (167)*
Post	3.11 (0.75)		0.49	3.29 (.67)	0.41	2.68 (.76)	0.89
³ Declarative knowledge							
Pre	10.42 (1.86)		14.22 (592)*	10.73 (1.70)	11.87 (422)*	9.63 (2.00)	7.85 (169)*
Post	11.40 (1.86)		0.53	11.67 (1.77)	0.54	10.72 (1.90)	0.56

¹Perceived Knowledge scale score is an average of 5 items of core elements of knowledge about suicide prevention (i.e., knowledge about local resources for help with suicide) related to the gatekeeper role. Each item was rated on a 5-point Likert-type scale, from (0 = *Poor*) to (4 = *Excellent*). Significant differences noted for education at pretest.

²Self-Efficacy scale score is an average of 5 items related to the gatekeeper role and their ability to identify and intervene with an individual at risk for suicide individual. Each item was rated on a 5-point Likert-type scale, from (0 = *Poor*) to (4 = *Excellent*). Significant differences noted for education and experience in health related questioning at pretest.

³Declarative knowledge is a sum of the number of items correct on a 14-item test of facts and concepts covered in the chosen curriculum. Significant differences noted for education at pretest.

**p* < .0001, two-tailed for differences between pre and post scale scores.

^aES, effect size using Cohen's *d* where 0.2 = small, 0.5 = medium, 0.8 = large.

Community Gatekeeper Training Evaluation

Both the clinical and nonclinical cohorts had significantly higher scores on all outcome measures, with greater mean score and effect size differences using Cohen's *d* noted in the nonclinical cohort than the clinical cohort (see Table 1) (Cohen, 1988). The total sample reported a high level of value (96.4%) and satisfaction (93.3%) with the training, with significant differences between the cohorts on a number of satisfaction items. After the training, the nonclinical cohort as compared to the clinical staff reported being more aware of risk factors for suicide (93.5% vs. 82.9%, $p < .0001$).

Behavioral Rehearsal Practice Session

Results from the scripted practice session using a standardized peer observational checklist showed that just over half of the total sample of participants (55.7%) documented that they used the checklist in their small group activity. There were no significant differences between participants who documented the gatekeeper skills and those who did not on nearly all of the demographic variables except among clinicians who reported they were members of an Other racial group (2% who used the checklist vs. 10% who did not, $p = .001$). Overall, the clinical staff who participated in the practice session reported that it was acceptable, with proportions ranging from 51.9% to 77.7% whereas the nonclinical cohort rated the behavioral rehearsal practice session higher with proportions ranging from 60.1%–80.3%.

DISCUSSION

This study examined a community gatekeeper training program and found positive training-related gains in satisfaction,

knowledge, self-efficacy, and three gatekeeper skills taught to participants. The gatekeeper training appears to have had a greater impact (as measured by the large effect size) among the nonclinical staff's self-efficacy (.89) and perceived knowledge (.96) in knowing what to do and say to someone identified to be in a suicidal crisis. The clinical staff, while not having as large an effect size, also demonstrated training related gains from pre to post training in knowledge and self-efficacy. It should be noted that Cohen's *d* is often considered a crude estimate of the effect size and should be interpreted with caution (McGrath & Meyer, 2006). However, in this study it provided a useful benchmark for detecting differences between clinical and nonclinical participants.

The behavioral rehearsal was designed to provide an opportunity to practice the three skills—question, persuade, and refer—taught in community gatekeeper training. While both groups found the experience to be acceptable, nonclinical staff rated the experience proportionally higher, indicating that perhaps the gatekeeper skills were novel. The opportunity to rehearse the suicide prevention skills in a supportive peer environment may be particularly important to these participants.

With such a broad-based training on suicide prevention, some gain was expected in both groups. This study confirms increased knowledge and self-efficacy among staff after attending a work place gatekeeper training (Cross, Matthieu, Cerel et al., 2007), but this is the first study that has included a clinical cohort in a study of community gatekeeper training. The rationale for including clinical professionals was guided by previous research on graduate training specific to suicide prevention that demonstrated that such training among mental health professionals is limited (Bongar & Harmatz, 1991; Ellis & Dickey, 1998; Ellis, Dickey, & Jones, 1998; Jacobson, Ting, Sanders et al., 2004;

King, Kovan, London et al., 1999; Kleespies, Penk, & Forsyth, 1993; Levin, 1994). The gains exhibited appear to support the premise that gatekeeper training can enhance the capacity of current clinical providers while at the same time provide a foundation for nonclinicians and others with a front line job function.

Limitations

This study has limitations, including selection bias of the participants. The sample comprises only one segment of the VA health care system, outpatient readjustment counseling centers and, those attendees who self-selected to participate. While these centers are staffed by a diverse group of individuals, this sample represents a well educated employed group that only work with veterans, their families, and their local community outside of the VA medical facilities. Therefore, this study is hindered in its ability to generalize beyond this group to all employees in the VA. Due to the lack of a control group, results cannot be definitively attributed to the intervention. Nevertheless, the large sample size provides a broad perspective of the feasibility and acceptability of providing gatekeeper training in the workplace.

CONCLUSIONS

Gatekeeper training for suicide prevention can increase the capacity of VA staff to engage, identify, and refer veterans at risk for suicide to appropriate care. Future studies of gatekeeper training in the VA should obtain information from trainees on referral practices, clinical outcome data on the referred veterans, and include the use of a control group, perhaps using a wait list design. Efforts should focus on how to enhance the specificity of referral sources to local agencies and specific providers by name and/or location. In addition, more

direct inquiry about suicide risk is needed to increase the potential transfer of gatekeeper behaviors from training to practice.

AUTHOR NOTE

Monica M. Matthieu, Washington University in St. Louis, George Warren Brown School of Social Work, Center for Mental Health Services Research, St. Louis, MO and Department of Veterans Affairs, Canandaigua VA Medical Center, Veterans Integrated Service Network 2, Center of Excellence, Canandaigua, New York.

Wendi Cross, University of Rochester, Department of Psychiatry, Center for the Study and Prevention of Suicide and the Developing Center for Population and Public Health Interventions for Suicide Prevention, Rochester, NY.

Alfonso R. Batres and Charles M. Flora, Department of Veterans Affairs, Veterans Health Administration, Office of Readjustment Counseling, Washington, DC.

Kerry L. Knox, University of Rochester, Department of Psychiatry, Center for the Study and Prevention of Suicide and the Developing Center for Population and Public Health Interventions for Suicide Prevention, Rochester and Department of Veterans Affairs, Canandaigua VA Medical Center, Veterans Integrated Service Network 2, Center of Excellence, Canandaigua, NY.

This project was supported by NIMH Institutional T32 grants for Dr. Matthieu (MH020061; PI: Conwell); the NIMH funded P20 Developing Center for Public Health and Population-Based Approaches to Suicide Prevention (MH071897; PI: Caine) and the NIMH funded K01 (MH055317) for Dr. Knox.

We gratefully acknowledge Mary Schohn, Ph.D., of the Center for Integrated Healthcare for her invaluable collaboration, DeQuincy Lezine, Ph.D. for his assistance with the suicide exposure assessments and

Lynda Chauncey, B.A. for her data entry assistance. We also thank Yeates Conwell, MD and Eric Caine, MD, of the University of Rochester's Center for the Study and Prevention of Suicide for their ongoing support of this project. This project would not be possible without the tremendous commitment on the part of the entire Vet Center program and the veterans they serve.

The views expressed in this article are those of the authors and do not necessarily represent the views of the Department of Veterans Affairs.

Correspondence concerning this article should be addressed to Monica M. Matthieu, Ph.D., LCSW, Washington University in St. Louis, George Warren Brown School of Social Work, Center for Mental Health Services Research, Campus Box 1196, St. Louis, MO 63130. E-mail: mmatthieu@wustl.edu

REFERENCES

Bongar, B. & Harmatz, M. (1991). Clinical psychology graduate education in the study of suicide: Availability, resources, and importance. *Suicide and Life Threatening Behavior, 21*, 231–244.

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Hillsdale, N.J.: L. Erlbaum Associates.

Cross, W., Matthieu, M. M., Cerel, J., et al. (2007). Proximate outcomes of gatekeeper training for suicide prevention in the workplace. *Suicide and Life Threatening Behavior, 37*, 659–670.

Ellis, T. E. & Dickey, T. O. (1998). Procedures surrounding the suicide of a trainee's patient: A national survey of psychology internships and psychiatry residency programs. *Professional Psychology-Research and Practice, 29*, 492–497.

Ellis, T. E., Dickey, T. O., & Jones, E. C. (1998). Patient suicide in psychiatry residency programs—A national survey of training and postvention practices. *Academic Psychiatry, 22*, 181–189.

Goldsmith, S. K., Pellmar, T. C., Klienman, A. M., et al. (2002). *Reducing suicide: A national imperative*. Washington, DC: The National Academies Press.

Jacobson, J. M., Ting, L., Sanders, A., et al. (2004). Prevalence of and reactions to fatal and nonfatal

suicide behavior: A national study of mental health social workers. *Omega, 4*, 237–248.

King, A., Kovan, R., London, R., et al. (1999). Toward a standard of care for treating suicidal outpatients: A survey of social workers' beliefs about appropriate treatment behaviors. *Suicide and Life Threatening Behavior, 29*, 347–352.

Kleespies, P. M., Penk, W. E., & Forsyth, J. P. (1993). The stress of patient suicidal behavior during clinical training: Incidence, impact, and recovery. *Professional Psychology-Research and Practice, 24*, 293–303.

Knox, K. L., Conwell, Y., & Caine, E. D. (2004). If suicide is a public health problem, what are we doing to prevent it? *American Journal of Public Health, 94*, 37–45.

Knox, K. L., Litts, D. A., Talcott, G. W., et al. (2003). Risk of suicide and related adverse outcomes after exposure to a suicide prevention programme in the US Air Force: Cohort study. *British Medical Journal, 327*, 1376.

Levin, C. (1994). *Graduate training in clinical social work and suicide*. Doctoral dissertation, Palo Alto, CA: Pacific Graduate School of Psychology.

Mann, J. J., Apter, A., Bertolote, J., et al. (2005). Suicide prevention strategies: A systematic review. *Journal of the American Medical Association, 294*, 2064–2074.

McGrath, R. E. & Meyer, G. J. (2006). When effect sizes disagree: The case of R and D. *Psychological Methods, 11*, 386–401.

PHS (1999). *The Surgeon General's call to action to prevent suicide*. Rockville, MD: U.S. Department of Health and Human Services, Public Health Service.

PHS (2001). *National strategy for suicide prevention: Goals and objectives for action*. Rockville, MD: U.S. Department of Health and Human Services, Public Health Service.

Quinnett, P. (1995). *QPR: Certified QPR Gatekeeper instructors training manual*. Spokane, WA: The QPR Institute.

Tierney, R. J. (1994). Suicide intervention training evaluation: a preliminary report. *Crisis, 15*, 69–76.

Tierney, R. J., Ramsay, R. F., Tanney, B. L., et al. (1990). Effective caregiver behavior in working with suicidal adolescents. In McMahon & Peters (Eds.), *Behavior disorders of adolescence* (pp. 139–153). New York: Plenum Press.

USAF (2001). The Air Force suicide prevention program. [On-line]. Available: <http://www.e-publishing.af.mil/pubfiles/af/44/afpam44-160/afpam44-160.pdf>

Wyman, P. A., Brown, C. H., Inman, J., et al. (in press). Randomized trial of a gatekeeper training program for suicide prevention: Impact on school staff after one year. *Journal of Consulting and Clinical Psychology*.

Copyright of Archives of Suicide Research is the property of Taylor & Francis Ltd and its content may not be copied or emailed to multiple sites or posted to a listserv without the copyright holder's express written permission. However, users may print, download, or email articles for individual use.