Naturalistic Clinical Decision Making by Emergency Department Staff and the Assignment of Suicide Risk Categories within an Urban Veteran Population

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ABSTRACT

The ability to comprehensively and effectively identify those individuals who are at greatest risk to engage in self-directed violence (SDV) forms the cornerstone for all professional suicide prevention activities. To that end, mental health professionals have come to rely on the use of risk stratification to identify at-risk individuals as a way to inform and guide risk management and treatment, without having the benefit of empirical evidence to support such practices. The current program evaluation examined archival data comprised of suicide risk assessments conducted by mental health professionals on suicidal veterans (N = 1,560) in the emergency department of a large, urban Veterans Administration medical center (VAMC) located in the northeastern United States over 2 years, as well as data for subsequent suicide attempts among this sample (n = 110). Results indicate that the current practice of stratifying suicide risk into specific categories (high, moderate, and low) effectively distinguishes the majority of those veterans who subsequently engaged in SDV from those who did not after being assessed by emergency department evaluators utilizing routine, naturalistic clinical judgment. Additional findings revealed that the categorical risk ratings of high, moderate, and low were distinguishable from one another, whereby a rating of high risk was more likely than both moderate and low risk to distinguish those suicidal veterans who subsequently engaged in SDV. Moderate risk identified at-risk veterans more accurately than those at low risk.

INTRODUCTION

Although suicide may be a leading cause of death, the overall low base rate of suicide in the general population makes its consistent prediction impossible (Pokorny, 1983, 1993). No set of clinical risk factors assessed at a single point in time can reliably predict future suicide risk. Standardized risk assessments have not been successful in predicting suicide. In the absence of highly accurate, empirically validated, and reliable suicide risk assessment instruments, it becomes incumbent upon a skilled clinician to conduct a reasonable assessment utilizing clinical judgment in a systematized approach (Simon, 2009).

Purpose of the Study

This program evaluation attempted to ascertain whether the current method of rating an individual's risk for suicide (i.e., low, moderate, or high) has clinical utility and final ratings accurately reflect the contribution of empirically supported risk factors. Additionally, this program evaluation aimed to understand how clinicians working in highly stressful and time-constrained hospital emergency departments (EDs) analyze and synthesize the risk and protective factors in their efforts to formulate a global assessment of suicide risk. Finally, this program evaluation examined whether the designation *moderate risk* independently serves a useful and functional clinical purpose by accurately reflecting an ED provider's analysis of the risk and protective factors in suicidal veterans and by informing treatment.

Methods

This was a retrospective cohort study that was designated as a quality assurance program evaluation by the Institutional Review Board at a large, northeastern U.S. VA medical center. This program evaluation was limited to utilizing archived data that is already contained in the VHA's Computerized Patient Records System (CPRS) and the Suicide Prevention Applications Network (SPAN). Suicidal Veterans who presented to the emergency department

CONCLUSIONS

The findings of this program evaluation have demonstrated that key empirically based suicide risk factors reliably inform evaluators' perceptions of categorical suicide risk assessment, even when such assessment is limited to using naturalistic clinical decision making. Furthermore, each of three categorical risk ratings appears to be able to independently distinguish between known risk factors that are known to increase the probability of future SDV. As predicted, the majority of veterans who subsequently engaged in SDV were previously rated at high risk. Those who were rated at low risk represented a very small segment of those veterans who engaged in SDV. The findings also suggest that although moderate risk identifies at-risk veterans more accurately than those at low risk, the statistical associations appear to be strongest when providers are distinguishing between high and low risk. The findings of this program evaluation corroborate what is already well known in the suicide literature: a history of self-directed violence is likely to result in mental health professionals' ratings of high risk.

RESULTS

Table 2.

Relationship Between Suicide Attempt in Preceding 30 Days and Suicide Risk Rating

	Suicide Risk Rating			
	Low/Moderate (n = 1,364)	High (n = 196)	Total (N =1,560)	p
Suicide Attempt in Preceding 30 Days				
No	1,332 (93.1%)	99 (6.9%)	1,431	< 0.0001
Yes	32 (24.8%)	97 (75.2%)	129	< 0.0001

Table 4.

Individual Suicide Risk Factors and Subsequent Ratings of Global Risk

Risk Factor	PPV/NPV (%)	X^2 df = 1	p
Suicidal Ideation	19/99	111.00	< .0001
Prior Suicide Attempt	21/92	56.89	< .0001
Hopelessness	29/94	153.10	< .0001
Current Psychiatric/ Substance Use Disorder	13/88	0.16	0.694
Auditory Hallucinations	29/88	20.71	< .0001
Impulsive Behaviors	20/90	25.09	< .0001
Severe Agitation	14/88	1.24	0.265
Perceived Burden	30/89	41.16	< .0001
Chronic Pain/Medical	19/89	16.43	< .0001
Homicidal Ideation	13/88	0.03	0.872
Aggressive Behaviors	15/88	0.54	0.464
Suicide Method Available	18/91	26.25	< .0001
Safety Plan Refusal	28/91	69.66	< .0001
Significant Losses	22/90	35.68	< .0001
No Risk Factors	0/87	6.20	0.013

Table 6.

Suicide Risk Factors and Subsequent Categorical Risk Ratings

	High vs. Low Risk		Moderate vs. Low Risk		High vs. Moderate Risk	
Risk Factor	X^2 df = 1	p	X^2 df = 1	p	X^2 df = 1	p
Suicidal Ideation	236.07	< .0001	345.83	< .0001	22.40	< .0001
Prior Suicide Attempt	116.69	< .0001	97.92	< .0001	12.20	0.0004
Hopelessness	304.04	< .0001	183.45	< .0001	42.20	< .0001
Current Psychiatric Disorder	5.17	0.0230	43.30	< .0001	5.03	0.0248
Hallucinations to Harm Self	32.90	< .0001	30.29	< .0001	3.99	0.0457
Impulsive Behavior	46.60	< .0001	32.90	< .0001	6.47	0.0174
Severe Agitation	9.33	0.0023	31.23	< .0001	0.72	0.3971
Perceived Burden on Family	55.27	< .0001	14.05	0.0002	17.20	< .0001
Chronic Pain/Serious Medical Problems	20.72	< .0001	4.62	0.0316	8.52	0.0035
Homicidal Ideation	5.43	0.0198	29.30	< .0001	2.23	0.1357
Aggressive Behaviors Towards Others	1.96	0.1613	4.09	0.0429	0.00	0.9999
Method Available for Suicide	52.40	< .0001	49.00	< .0001	5.36	0.0206
Refusal to Engage in Safety Planning	154.50	< .0001	100.06	< .0001	14.80	< .0001
Recent Significant Losses	59.70	< .0001	31.30	< .0001	11.50	0.0006
No Risk Factors	11.30	0.0008	31.00	< .0001	0.61	0.4336

Table 8.

Emergency Department (ED) Providers' Suicide Risk Ratings in Relationship to Subsequent Veteran Acts of Self-Directed Violence (SDV)

	Emergency Department Suicide Risk Rating							
	Low		Moderate		High		Total	
Suicide Attempt	n	%	n	%	n	%	n	%
Yes	22	(3.0)	39	(6.1)	49	(25.0)	110	(7.1)
No	701	(97.0)	602	(93.9)	147	(75.0)	1,450	(92.9)
Total	723		641		196		1,560	

Table 7.

Emergency Department (ED) Provider Suicide Ratings in Relationship to Subsequent Acts of Self-Directed Violence (SDV) (Percentages in Parentheses)

Suicide Attempt	Not High Risk	High Risk	Total
Yes	61 (4.5)	49 (25.0)	110 (7.1)
No	1,303 (95.5)	147 (75.0)	1,450 (92.9)
Total	1,364	196	1,560