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Helping Callers to the National Suicide Prevention Lifeline Who Are at Imminent Risk of Suicide: Evaluation of Caller Risk Profiles and Interventions Implemented

Madelyn S. Gould, PhD, MPH, Alison M. Lake, MA, Jimmie Lou Munfakh, BA, Hanga Galfalvy, PhD, Marjorie Kleinman, MS, Caitlin Williams, BA, Andrew Glass, MS, and Richard McKeon, PhD, MPH

Crisis lines are settings where identifying individuals at imminent risk of suicidal behavior and intervening to keep them safe are critical activities. We examined clinical characteristics of crisis callers assessed by telephone crisis helpers as being at imminent risk of suicide, and the interventions implemented with these callers. Data were derived from 491 call reports completed by 132 helpers at eight crisis centers in the National Suicide Prevention Lifeline network. Helpers actively engaged the callers in collaborating to keep themselves safe on 76.4% of calls and sent emergency services without the callers' collaboration on 24.6% of calls. Four different profiles of imminent risk calls emerged. Caller profiles and some helper characteristics were associated with intervention type. Our findings provide a first step toward an empirical formulation of imminent risk warning signs and recommended interventions.

The concept of imminent suicide risk, also referred to as near-term or immediate risk (Boudreaux & Horowitz, 2014; Claassen, Harvilchuck-Laurenson, & Fawcett, 2014), is critical to and used regularly by frontline clinicians and first responders. Unfortunately, an empirical foundation for warning signs of imminent suicide risk is lacking

Madelyn S. Gould, Division of Child and Adolescent Psychiatry, College of Physicians & Surgeons, Columbia University, New York, NY, USA, Department of Epidemiology, School of Public Health, Columbia University, New York, NY, USA, and New York State Psychiatric Institute, New York, NY, USA; Alison M. Lake and Jimmie Lou Munfakh, Division of Child and Adolescent Psychiatry, New York State Psychiatric Institute, New York, NY, USA; Hanga Galfalvy, Department of Psychiatry, College of Physicians & Surgeons, Columbia University, New York, NY, USA, and Department of Biostatistics, School of Public Health, Columbia University, New York, NY, USA; Marjorie Kleinman, Division of Child and Adolescent Psychiatry, New York State Psychiatric Institute, New York, NY, USA; Caitlin Williams, Clinical Psychology, Auburn University, Auburn, AL, USA; Andrew Glass, Division of Biostatistics, Department of Psychiatry, Columbia University, New York, NY, USA; Richard McKeon, Division of Prevention, Traumatic Stress, and Special Programs, Center for Mental Health Services (CMHS), Substance Abuse and Mental Health Services Administration, Rockville, MD, USA.

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Address correspondence to Madelyn S. Gould, PhD, MPH, Division of Child & Adolescent Psychiatry, NYSPI, 1051 Riverside Drive, Unit 72, New York, NY 10032; E-mail: gouldm@nyspi.columbia.edu

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(Rudd et al., 2006), and the definition of the term *suicide imminence* is fraught with problems such as lack of clarity and imprecision (Simon, 2006). Relatedly, there is little empirical basis for the triage and treatment decisions that need to be made when individuals are considered to be at imminent risk of suicide (Berman & Silverman, 2013). The increasing recognition of the urgent need to develop an empirically based definition of imminent risk and to validate procedures for determining who is at risk of attempting suicide in the immediate future is reflected in the aspirational goals of the National Action Alliance for Suicide Prevention's Research Prioritization Task Force (Action Alliance RPTF; Boudreaux & Horowitz, 2014; Claassen et al., 2014; Glenn & Nock, 2014). The Action Alliance RPTF's aspirational goals 2 and 3 focus on the formulation and assessment of imminent suicide risk, with an emphasis on suicide risk screening among individuals in diverse populations and in diverse settings (Action Alliance RPTF, 2014). One such setting highlighted by the Action Alliance RPTF is crisis lines.

The National Suicide Prevention Lifeline (Lifeline; www.suicidepreventionlifeline.org)—the national network of over 160 community crisis centers in the United States—responds each year to approximately one million callers, a quarter of whom are suicidal (Gould, Cross, Pisani, Munfakh, & Kleinman, 2013). Lifeline's policies for crisis helpers, described in more detail later in this article, emphasize collaboration between helpers and callers; even so, helpers are instructed to initiate lifesaving services without callers' consent if no less invasive means is available for preserving the caller's life. Determining whether a caller is at imminent risk of engaging in suicidal behavior and in need of emergency intervention is therefore one of the most significant judgments that a Lifeline crisis center helper has to make. The need for a clear and explicit policy for assisting imminent risk callers to the Lifeline was highlighted by a series of Substance Abuse and Mental Health Services (SAMHSA)-funded evaluations of network crisis centers published in 2007 (Gould, Kalafat, Munfakh, & Kleinman, 2007; Mishara et al., 2007a, 2007b). Gould et al. (2007) found that emergency responses varied considerably at eight crisis centers for callers deemed to be at imminent suicide risk. Overall, emergency rescue was initiated in 37.9% of cases in which callers had taken some action to kill themselves immediately before calling the center. In another study, on monitored calls during which a suicide attempt was in progress, Mishara et al. (2007a, 2007b) found that emergency services were known to be dispatched in 18.2% of cases (6/33), and 24.2% (8/33) of the callers changed his or her mind about the attempt, leaving 57.6% of calls (19/33) without an observed mitigation of the caller's risk. To address these shortcomings, the Lifeline published a policy for helping callers at imminent risk of suicide (Draper, Murphy, Vega, Covington, & McKeon, 2015) which provides guidance on making a judgment regarding imminent risk and outlines recommended practices for reducing imminent risk through hotline interventions.

The Lifeline's imminent risk (IR) policy provides a formulation of imminent risk that is based on the core concepts of the Interpersonal-Psychological Theory of Suicide (IPTS; Joiner, 2005; Joiner et al., 2007; Van Orden et al., 2010). The Lifeline's modified IPTS model asserts that the combination of suicidal desire with intent and acquired capability is associated with imminent risk (Berman & Silverman, 2013; Joiner et al., 2007). Conversely, it asserts that suicidal desire, which is relatively common, does not signal imminent risk of suicide if either intent or capability is absent (Joiner et al., 2007). In keeping with this model, the Lifeline imminent risk policy defines *imminent risk* as present when:

> the [helper] responding to the call believe[s], based on information gathered during the exchange from the person at risk or someone calling on his/her behalf, that

> there is a close temporal connection between the person's current risk status and actions that could lead to his/her suicide. The risk must be present in the sense that it creates an obligation and immediate pressure on Center Staff to take urgent actions to reduce the Caller's risk; that is, if no actions were taken, the Center Staff believes that the Caller would be likely to seriously harm or kill him/herself. Imminent risk may be determined if an individual states (or is reported to have stated by a person believed to be a reliable informant) both a desire and intent to die and has the capability of carrying through his/her intent. (Draper et al., 2015, p. 3)

The model also takes into account protective factors, such as connectedness with others, which may buffer or mitigate suicide risk. When suicidal desire, intent, and capability are all present, the model indicates that the presence of buffers may make no difference; however, when suicidal desire is paired with intent or capability but not both, the presence or absence of buffers may be decisive (Joiner et al., 2007). The inclusion of suicidal desire, intent, capability, and buffers in the Lifeline risk assessment model is not designed to replace the helper's judgment, but it may assist the helper in assessing short-term warning signs for suicide (Draper et al., 2015). To our knowledge, there are no empirical tests to date of the contribution of these IPTS-based facets of risk to an individual's imminent risk status (Berman & Silverman, 2013).

Once imminent risk has been identified, the Lifeline's IR policy encourages helpers to actively seek collaboration with callers at imminent risk and to enable these callers "to work toward securing their own safety" ("active engagement"; Draper et al., 2015, p. 3); the policy furthermore encourages helpers to use the least invasive interventions capable of preserving the caller's safety. Involuntary interventions ("active rescues") are to be used as a last resort because they may be unnecessarily stigmatizing and traumatizing and may deter future outreach for help (Draper et al., 2015). Nevertheless, the Lifeline IR policy highlights the importance of initiating an active (i.e., involuntary) rescue when all other possible actions to prevent a caller from dying by suicide have been exhausted.

To date, there is no information about the extent to which crisis centers are employing the strategies described in the Lifeline IR policy. The current study addresses this gap in knowledge by describing the types of interventions that are implemented with Lifeline callers considered to be at imminent suicide risk. Additional aims of the current study are to provide a profile of suicide risk characteristics of Lifeline callers judged to be at imminent risk of suicide, to assess the relationship between the callers' risk profiles and the interventions employed, and to examine whether helpers' prior training and experience impact the interventions they choose to implement with imminent risk callers. The information provided by the study will help build a foundation for an empirically based formulation of imminent suicide risk, and clinical recommendations for effectively reducing it.

METHODS

Sample

Crisis Centers. Eight centers in the Lifeline network from across the United States participated in the study. Four of the centers were selected on the basis of their prior participation in SAMHSA's follow-up initiative, wherein crisis centers are funded to provide clinical follow-up to suicidal callers and suicidal individuals discharged from hospital emergency departments. The other four centers were selected on the basis of their having less systematic or extensive experience providing clinical follow-up services, and on their rough comparability in

terms of size and geographical distribution to the original four centers.

Crisis Helpers. All helpers responsible for answering calls to the Lifeline and the centers' local crisis lines were eligible for participation in the study. A total of 266 eligible helpers consented to study participation. Of these, 132 ultimately completed questionnaires on at least one imminent risk call. The remaining eligible helpers did not have the opportunity to complete a questionnaire due to their not answering an imminent risk call during the data collection period. Of the 132 helpers, 57 (43.2%) were volunteers and 75 (56.8%) were paid employees, including 12 (9.1%) supervisors/trainers. Less than 20% of the helpers did not have bachelor's degrees, over 40% had bachelor's degrees as their highest level of education, and approximately 40% had graduate degrees. Only 20 (15.2%) were licensed clinicians/mental health professionals. Helpers had spent an average of 4 years working as telephone crisis helpers (range: less than 1 to 33 years), spent an average of 19 hours per week answering calls (range: 1 to 40 hours), and handled an average of 5.1 suicide calls per week (range: 0 to 30 calls).

No clinical training was provided as part of the current project. Participating helpers had all received Lifeline-approved trainings at their centers and had diverse histories of participation in supplementary trainings and experience providing systematic follow-up to suicidal callers. Applied Suicide Intervention Skills Training (ASIST; Gould et al., 2013) and training in other Safety Planning protocols had each been completed by approximately 80% of helpers, with nearly 100% of helpers having completed one or the other type of training, and approximately 60% having completed both. The most popular sources of Safety Planning protocols, other than ASIST, were protocols developed at the individual crisis centers and protocols developed by Stanley and Brown (2012). About two-thirds of helpers were responsible for making outgoing safety-check calls to suicidal callers within 48 hours of the incoming crisis call, and about half of these were also responsible for conducting longer-term follow-up (lasting more than 1 week).

Calls from Callers at Imminent Risk of Suicide. Over the course of data collection, helpers handled 491 calls from callers they considered to be at imminent risk. Each helper answered an average of 3.7 imminent risk calls (range: 1 to 26 calls per helper). Helpers were asked to make a note of whether a particular caller had, to their knowledge, made a previous imminent risk call to their center. Helpers indicated this was the case for 15.1% of calls included in our sample. Due to the lack of identifying information collected on callers, we are unable to say whether our sample may include forms describing more than one call from the same individual. The unit of analysis is therefore not the imminent risk caller but the imminent risk call.

Procedures

At the outset of their participation in the study, helpers were asked to complete a one-page self-report questionnaire describing their training and experience as a telephone crisis helper. Thereafter, for the 9-month data collection period from February to September 2012, helpers were asked to complete a four-page questionnaire about each call from an individual they deemed to be at imminent risk of suicide. Calls were eligible for inclusion if the helper deemed imminent risk to be present at any time during the call, whether or not imminent risk was considered present at the end of the call. Because a goal of the study was to assess the extent to which helpers were adhering to the Lifeline policy on helping imminent risk callers, with which the helpers were expected to be familiar, helpers were not instructed by research staff in how to define imminent risk. Instead, helpers were instructed to use, and to document on their questionnaires, their own understanding of this term. Helpers were instructed not to use the questionnaire as an interview or to collect any data directly from the callers for

study purposes. Instead, helpers were instructed to conduct the calls according to their center's protocols and their own clinical judgment, and to use the questionnaire to describe their perception of and intervention with the caller immediately after the intervention was completed.

Measures

The *Helper Questionnaire* developed for this study asked the helpers to describe their employment status at their center (whether paid employee, volunteer, and/or supervisor/trainer), how long they had been working/volunteering as a telephone crisis helper, the average number of hours per week they spent answering crisis lines, the average number of suicide calls they handled per week, their highest level of education, whether they were licensed clinicians/mental health professionals, whether they had completed training in ASIST or in the use of any other Safety Planning protocols, and whether they were responsible for conducting long-term follow-up (more than 1 week), short-term follow-up (less than 1 week), or immediate safety checks (within 48 hours of the crisis call) with suicidal callers. In addition, helpers were asked to report any additional training in ASIST or in Safety Planning protocols they completed during the study period.

The *Imminent Risk Form* developed for this study assessed call details (line called, language spoken, helper(s) who handled the call, and whether to the helper's knowledge the center had handled a previous imminent risk call from the same caller) and the caller's gender. The helper was asked to check all that applied from two lists of potential interventions implemented with or without the person's consent (see Table 1). These interventions were derived from the Lifeline

TABLE 1
Interventions Implemented with Imminent Risk Callers (N = 491)

	Type of Intervention	*n*	%
	Active Engagement (Collaborative)		
	Person at Imminent Risk Agreed to.....		
Less Invasive	Take action on his/her own behalf to immediately reduce risk (e.g., collaborate on safety plan; not incl. self-transport)	214	43.6
	Receive follow-up from center	142	28.9
	Involve a 3rd party to keep him/her safe (not for transport)	125	25.5
	Get rid of means	65	13.2
	Be evaluated by a mobile crisis/outreach team	22	4.5
	Transport him/herself to a hospital or walk-in clinic	21	4.3
	Have center contact the Veterans Health Administration	20	4.1
	Be transported to the hospital by a 3rd party	15	3.1
	Any less invasive active engagement	334	68.0
More Invasive	Have center send emergency services (police, sheriff, EMS)	94	19.1
Any Active Engagement		375	76.4
	Active Rescue (Noncollaborative)		
	Without Consent of Person at Imminent Risk, Helper.....		
Less Invasive	Involved a 3rd party (not for transport)	8	1.6
	Sent a mobile crisis/outreach team	5	1.0
	Contacted the Veterans Health Administration	4	0.8
	Involved a 3rd party for transport to hospital	1	0.2
	Any less invasive active rescue	18	3.7
More Invasive	Sent emergency services (police, sheriff, EMS)	121	24.6
Any Active Rescue		136	27.7
Imminent Risk Reduced Enough so Rescue was Not Needed		192	39.1

IR policy (Draper et al., 2015; described earlier) and were categorized as collaborative (active engagement) or noncollaborative (active rescue). The helpers also rated whether imminent risk was reduced enough during the course of the call so that rescue (broadly understood as the involvement of emergency services, with or without the caller's collaboration) was not needed. Finally, the form asked the helper to describe the risk profile of the caller deemed to be at imminent risk of suicide by rating the caller on a series of 36 potential risk and protective factors (see Table 2). These risk and protective factors were derived from the Lifeline's risk assessment standards (Joiner et al., 2007) and grouped into the categories of suicidal desire, suicidal intent, suicidal capability, and buffers.

The project's protocol was approved by the institutional review board of the New York State Psychiatric Institute and the Department of Psychiatry of Columbia University.

Statistical Analyses

Analyses were performed on 491 imminent risk forms completed by 132 crisis helpers at the eight centers. Analyses were performed in SAS 9.3 (Copyright 2002–2011, SAS Institute Inc., Cary, NC) and the statistical software R, version 2.12.1 (R Foundation for Statistical Computing, Vienna, Austria). All variables coded using five categories (A lot, Moderately, A little, Not at all, Don't know) were recoded into three categories: "High" (corresponding to codes of Moderately/A lot), "Low" (corresponding to codes of A little/Not at all), and "Don't know." Attempt in progress and preparatory behavior (excluding an attempt) were combined into a single variable with four levels: "Neither preparatory behavior nor attempt," "Preparatory behavior/No attempt," "Attempt in progress," and "Don't know."

First, descriptive statistics of the intervention outcomes were calculated. Next, to examine the characteristics of the imminent risk callers/calls, latent class analysis (LCA) was performed to determine whether the call data were best described as containing a single profile of imminent risk calls or multiple discrete profiles. "PROC LCA" was used in SAS 9.3 to model the latent classes (this procedure is not part of the standard SAS distribution and had to be downloaded from http://methodology.psu.edu/downloads/proclcalta). The Bayesian information criterion was used to determine the optimal number of latent classes. All candidate predictors (risk and protective variables) from the call data were used in the model, with the exception of variables with either "not applicable" categories or substantial "don't know" answers (more than 30%; see note under Table 2). "Don't know" responses for the remaining variables were included in the LCA because their distribution was considered to be informative.

To test for the association between the caller/call's characteristics and the interventions, we first modeled each of the outcome intervention variables (active engagement, active rescue, imminent risk reduced without rescue; all of them binary) separately as a function of the latent classes, using mixed-effect logistic regression models. Random intercept effects were included for each call center, and each helper nested within center, to account for variability shared by callers to the same center and handled by the same helper. The fixed effect predictor was the latent class variable. Next, the item from each of the four IPTS facets that was most significantly associated with the latent class variable was identified using single-predictor multinomial logistic regression models with latent class as outcome. Then, to test the association between the four IPTS facets of caller characteristics and the intervention outcomes, each outcome intervention measure was modeled as a function of the representative IPTS items using a mixed effects logistic regression model as described earlier, with the IPTS items as fixed predictor variables. We also tested the associations between the helpers' perceptions of the caller's engagement with

TABLE 2
Profiles of Imminent Risk Callers/Calls

	Class I (n = 243, 49.5%) (high risk; moderate-to-high engagement)			Class II (n = 105, 21.4%) (lowest risk; highest engagement)			Class III (n = 90, 18.3%) (moderate-to-high risk; lower engagement)			Class IV (n = 53, 10.8%) (highest risk; lowest engagement)			Total (N = 491)		
	Yes/ High[a]	No/ Low	DK	Yes/ High	No/ Low	DK	Yes/ High	No/ Low	DK	Yes/ High	No/ Low	DK	Yes/ High	No/ Low	DK
Suicidal Desire (High/Low)															
Hopelessness	99.2%	0.8%	0.0%	75.2%	21.9%	2.9%	86.7%	4.4%	8.9%	20.8%	0.0%	79.2%	83.3%	5.9%	10.8%
Helplessness	96.3%	2.1%	1.6%	67.6%	26.7%	5.7%	67.8%	6.7%	25.6%	9.4%	0.0%	90.6%	75.6%	7.9%	16.5%
Feeling trapped	80.7%	7.0%	12.3%	61.0%	21.9%	17.1%	53.3%	5.6%	41.1%	0.0%	1.9%	98.1%	62.7%	9.4%	27.9%
Feeling alone	93.8%	6.2%	0.0%	64.8%	27.6%	7.6%	70.0%	4.4%	25.6%	11.3%	0.0%	88.7%	74.3%	9.8%	15.9%
Psychological pain	97.1%	1.2%	1.6%	76.2%	12.4%	11.4%	83.3%	0.0%	16.7%	22.6%	0.0%	77.4%	82.1%	3.3%	14.7%
Reasons for dying	95.5%	3.7%	0.8%	56.2%	35.2%	8.6%	66.7%	11.1%	22.2%	7.5%	3.8%	88.7%	72.3%	11.8%	15.9%
Suicidal ideation	98.8%	0.0%	1.2%	80.0%	15.2%	4.8%	96.7%	3.3%	0.0%	49.1%	9.4%	41.5%	89.0%	4.9%[b]	6.1%
Persistence of suicidal thoughts	85.6%	6.2%	8.2%	60.0%	30.5%	9.5%	72.2%	10.0%	17.8%	37.7%	11.3%	50.9%	72.5%	12.6%	14.9%
Suicidal Intent (Yes/No)															
Expressed intent to die	96.3%	2.5%	1.2%	83.8%	13.3%	2.9%	90.0%	5.6%	4.4%	92.5%	1.9%	5.7%	92.1%	5.3%	2.6%
Plan to kill self	98.4%	0.4%	1.2%	84.8%	11.4%	3.8%	93.3%	1.1%	5.6%	84.9%	0.0%	15.1%	93.1%	2.9%	4.1%
Preparatory behaviors only[c]	36.2%	17.7%	24.3%/ 21.8%	28.6%	42.9%	24.8%/ 3.8%	12.2%	26.7%	35.6%/ 25.6%	7.5%	15.1%	41.5%/ 35.8%	27.1%	24.4%	28.3%/ 20.2%
Attempt in progress	21.8%	77.0%	1.2%	3.8%	91.4%	4.8%	25.6%	68.9%	5.6%	35.8%	43.4%	20.8%	20.2%	74.9%	4.9%
Suicidal Capability (Yes/No)															
Increased anxiety	80.2%	1.6%	18.1%	77.1%	0.0%	22.9%	57.8%	1.1%	41.1%	22.6%	1.9%	75.5%	69.2%	1.2%	29.5%
Current intoxication	26.7%	61.3%	11.9%	16.2%	73.3%	10.5%	26.7%	43.3%	30.0%	18.9%	32.1%	49.1%	23.6%	57.4%	18.9%
Out of touch with reality	7.4%	72.4%	20.2%	5.7%	80.0%	14.3%	12.2%	47.8%	40.0%	7.5%	28.3%	64.2%	7.9%	64.8%	27.3%
Buffers (High/Low)															
Social supports	18.5%	80.2%	1.2%	53.3%	44.8%	1.9%	30.0%	47.8%	22.2%	9.4%	20.8%	69.8%	27.1%	60.3%	12.6%

(continued)

TABLE 2
(continued)

	Class I (n = 243, 49.5%) (high risk; moderate-to-high engagement)			Class II (n = 105, 21.4%) (lowest risk; highest engagement)			Class III (n = 90, 18.3%) (moderate-to-high risk; lower engagement)			Class IV (n = 53, 10.8%) (highest risk; lowest engagement)			Total (N = 491)		
	Yes/ High[a]	No/ Low	DK	Yes/ High	No/ Low	DK	Yes/ High	No/ Low	DK	Yes/ High	No/ Low	DK	Yes/ High	No/ Low	DK
Planning for future	7.4%	85.2%	7.4%	59.0%	33.3%	7.6%	15.6%	25.6%	58.9%	0.0%	11.3%	88.7%	19.1%	55.2%	25.7%
Sense of purpose	4.1%	93.0%	2.9%	62.9%	24.8%	12.4%	0.0%	17.8%	82.2%	0.0%	3.8%	96.2%	15.5%	55.0%	29.5%
Reasons for living	10.3%	89.7%	0.0%	81.0%	18.1%	1.0%	13.3%	27.8%	58.9%	10.3%	89.7%	0.0%	24.8%	53.8%	21.4%
Ambivalence about dying	28.0%	65.0%	7.0%	69.5%	22.9%	7.6%	23.3%	34.4%	42.2%	3.8%	13.2%	83.0%	33.4%	44.8%	21.8%
Immediate support available	21.8%	76.5%	1.6%	30.5%	67.6%	1.9%	22.2%	71.1%	6.7%	26.4%	50.9%	22.6%	24.2%	70.9%	4.9%
Other															
Engagement with helper	71.6%	28.4%	0.0%	97.1%	2.9%	0.0%	62.2%	34.4%	3.3%	35.8%	34.0%	30.2%	71.5%	24.6%	3.9%
Gender (female/ male/DK)	46.1%	53.9%	0.0%	54.3%	44.8%	0.9%	54.4%	45.6%	0.0%	62.3%	37.7%	0.0%	51.1%	48.7%	0.2%

Note. The following items were excluded from the latent class analysis because rates of "don't know" answers were greater than 30%: *within suicidal desire:* perceived burden to others, ability to control suicidal thoughts; *within suicidal capability:* history of suicide attempts, exposure to someone else's completed suicide, history of violence to others, aggression/anger (recent acts and/or threats), impulsive/reckless behavior (current or past), increased agitation, recent dramatic mood change, sleep problems, history of substance abuse; *within buffers:* core values/beliefs. In addition, the following contingency items were excluded because they were asked only if the caller had a suicide plan: *within suicidal intent:* method chosen (92.0% of those with a plan or 89.4% of total sample); *within suicidal capability:* means available (89.3% of those with a plan or 86.6% of total sample). DK, don't know.

[a]The response codes for the items within the suicide desire and buffers categories, as well as engagement with the helper, were dichotomized as "moderately/a lot" (high) and "none/a little" (low); the items within suicidal intent and suicidal capability were coded as "yes or no."

[b]Twenty-four callers (4.9%) were rated as having a little suicidal ideation; no one was rated as having no suicidal ideation. Of the callers rated as having a little suicidal ideation, the vast majority expressed an intent to die (70.8%) or had a plan to kill themselves (83.3%).

[c]The presence of preparatory behaviors was not coded if an attempt was in progress. The "don't know" columns for preparatory behaviors list the percentages of calls where the presence of preparatory behaviors was unknown, followed by the percentages of calls where the presence of preparatory behaviors was not coded because an attempt was in progress.

TABLE 3
Relationship Between Interventions and Caller/Call Characteristics

	Active Engagement (Collaborative)				Active Rescue (Noncollaborative)				Imminent Risk Reduced Enough/No Rescue Needed			
	n	%[a]	OR[b] (95% CI)	*p*	*n*	%[a]	OR[b] (95% CI)	*p*	*n*	%[a]	OR[b] (95% CI)	*p*
Latent Class												
I (*n* = 243) (high risk; moderate-to-high engagement)	183	75.3	F_{356} = 7.07	.0001	78	32.1	F_{356} = 6.66	.0002	84	34.6	F_{356} = 21.71	<.0001
II (*n* = 105) (lowest risk; highest engagement)	97	92.4			9	8.6			80	76.2		
III (*n* = 90) (moderate-to-high risk; lower engagement)	62	68.9			30	33.3			20	22.2		
IV (*n* = 53) (highest risk, lowest engagement)	33	62.3			19	35.8			8	15.1		
Reasons for dying												
High (*n* = 355)	268	75.5	0.25 (0.09–0.68)	.01	103	29.0	2.96 (1.25–6.98)	.01	132	37.2	0.23 (0.11–0.46)	<.0001
Low (*n* = 58)	53	91.4			7	12.1			41	70.7		
Attempt in progress												
Yes (*n* = 99)	57	57.6	0.24 (0.14–0.42)	<.0001	51	51.5	4.00 (2.44–6.67)	<.0001	10	10.1	0.10 (0.05–0.22)	<.0001
No (*n* = 368)	306	83.2			76	20.7			177	48.1		
Current intoxication												
Yes (*n* = 116)	81	69.8	0.39 (0.23–0.53)	.0001	40	34.5	1.88 (1.14–3.10)	.015	31	26.7	0.36 (0.21–0.60)	<.0001
No (*n* = 282)	235	83.3			62	22.0			141	50.0		
Sense of Purpose												
High (*n* = 76)	71	93.4	5.26 (1.96–14.29)	.002	6	7.9	0.17 (0.07–0.41)	.0005	61	80.3	7.81 (3.92–15.38)	<.0001
Low (*n* = 270)	201	74.4			89	33.0			94	34.8		

(continued)

TABLE 3
(continued)

	Active Engagement (Collaborative)				Active Rescue (Noncollaborative)				Imminent Risk Reduced Enough/No Rescue Needed			
	n	%[a]	OR[b] (95% CI)	*p*	*n*	%[a]	OR[b] (95% CI)	*p*	*n*	%[a]	OR[b] (95% CI)	*p*
Engagement with helper												
High (n = 351)	306	87.2	9.17 (5.35–15.87)	<.0001	64	18.2	0.18 (0.11–0.29)	<.0001	166	47.3	4.24 (2.45–7.30)	<.0001
Low (n = 121)	60	49.6			65	53.7			23	19.0		
Gender												
Female (n = 251)	195	77.7	1.21 (0.78–1.88)	0.39	71	28.3	1.03 (0.68–1.55)	0.89	99	39.4	1.22 (0.82–1.82)	0.33
Male (n = 239)	179	74.9			65	27.2			92	38.5		

[a]Row percent (percent of indicator with specific intervention/outcome).
[b]Odds ratio is presented unless otherwise noted.

them and the intervention outcomes and between gender and the intervention outcomes. While the caller's engagement with the helper is sometimes conceptualized as a buffer (Joiner et al., 2007), we differentiated this variable from other buffers because it was the only one that depended on the relationship between the helper and the caller. We used a mixed effects logistic regression model similar to those described previously with gender and caller's engagement as fixed predictor variables. Lastly, helper characteristics, such as highest level of education, volunteer status, hours per week answering calls, ASIST training, and Safety Planning training, were also tested individually as predictors of the intervention outcomes, using mixed-effect logistic regressions with random effects as already described.

While most of the predictor variables had three response categories, including "don't know," primary interest was in the comparison between high and low or yes and no values, so only the odds ratio estimate for that comparison is presented for each variable.

RESULTS

Interventions Implemented with Callers at Imminent Risk

The helpers actively engaged the callers in one or more collaborative interventions on 76.4% of the calls (see Table 1). Most of these interventions involved less invasive procedures such as the caller's taking action on his or her own behalf to immediately reduce risk (e.g., by collaborating on a safety plan), the caller's agreeing to receive a follow-up call from the crisis center, and/or the caller's agreeing to involve a third party to keep the caller safe. Emergency services were sent with the caller's collaboration on 19.1% of the calls. Active rescues (i.e., noncollaborative interventions) were implemented on 27.7% of calls. Most of these involved the more inva-

TABLE 4
Relationship Between Interventions and Helper Characteristics

	Active Engagement (Collaborative)				Active Rescue (Noncollaborative)				Imminent Risk Reduced Enough/No Rescue Needed			
	n	%[a]	OR (95% CI)	*p*	*n*	%[a]	OR (95% CI)	*p*	*n*	%[a]	OR (95% CI)	*p*
Volunteer status												
Yes (*n* = 103)	61	59.2	0.41 (0.23–0.74)	.003	44	42.7	2.31 (1.40–3.81)	.001	25	24.3	0.73 (0.37–1.45)	.37
No (*n* = 388)	314	80.9			92	23.7			167	43.0		
Licensed MH professional												
Yes (*n* = 102)	85	83.3	1.82 (0.89–3.70)	.10	20	19.6	0.58 (0.30–1.11)	.10	51	50.0	1.55 (0.73–3.27)	.25
No (*n* = 389)	290	74.6			116	29.8			141	36.2		
Responsible for any follow-up calls												
Yes (*n* = 339)	259	76.4	1.20 (0.66–2.22)	.54	95	28.0	0.87 (0.50–1.51)	.62	122	36.0	0.92 (0.49–1.72)	.79
No (*n* = 152)	116	76.3			41	27.0			70	46.1		
Responsible for long-term follow-up calls												
Yes (*n* = 241)	191	79.3	1.27 (0.72–2.22)	.41	60	24.9	0.72 (0.43–1.19)	.20	101	41.9	1.20 (0.68–2.13)	.53
No (*n* = 250)	184	73.6			76	30.4			91	36.4		
ASIST training												
Yes (*n* = 442)	339	76.7	1.08 (0.48–2.44)	.86	122	27.6	0.97 (0.46–2.08)	.94	178	40.3	1.37 0.58–3.23)	.47
No (*n* = 49)	36	73.5			14	28.6			14	28.6		
Safety Planning training												
Yes (*n* = 375)	279	74.4	0.79 (0.37–1.64)	.52	108	28.8	0.99 (0.51–1.92)	.97	154	41.1	1.55 (0.73–3.27)	.25
No (*n* = 115)	95	82.6			28	24.3			38	33.0		
Highest level of education												
Less than BA (*n* = 72)	53	73.6	$F_{358} = 0.32$	.81	23	31.9	$F_{358} = 0.46$	.71	17	23.6	$F_{358} = 1.19$	.32
BA (*n* = 218)	167	76.6			62	28.4			82	37.6		
Master's (*n* = 191)	147	77.0			48	25.1			91	47.6		
Doctorate (*n* = 8)	6	75.0			3	37.5			1	12.5		

(continued)

TABLE 4
(continued)

	Active Engagement (Collaborative)				Active Rescue (Noncollaborative)				Imminent Risk Reduced Enough/No Rescue Needed			
	Yes Mean (*SD*)	No Mean (*SD*)	OR[b] (95% CI)	*p*	Yes Mean (*SD*)	No Mean (*SD*)	OR (95% CI)	*p*	Yes Mean (*SD*)	No Mean (*SD*)	OR (95% CI)	*p*
No. of years experience as crisis helper	5.54 (7.03)	4.67 (6.26)	0.99 (0.946–1.042)	.77	4.60 (6.34)	5.62 (7.04)	0.99 (0.946–1.030)	.55	6.10 (7.15)	4.85 (6.63)	1.01 (0.963–1.055)	.73
No. of hours per week answering calls	29.38 (13.78)	22.86 (14.95)	1.02 (1.007–1.041)	.006	24.12 (15.46)	29.27 (13.62)	0.98 (0.965–0.995)	.008	31.09 (12.44)	25.76 (15.07)	1.02 (1.002–1.039)	.03
No. of suicide calls answered per week	6.86 (6.28)	5.91 (6.15)	1.02 (0.970–1.067)	.50	6.02 (6.10)	6.88 (6.30)	0.99 (0.945–1.026)	.46	7.84 (6.79)	5.87 (5.77)	1.06 (1.015–1.110)	.009

[a]Row percent (percent of indicator with specific intervention/outcome).
[b]Confidence intervals of ORs are presented to three decimal points so that estimates are not rounded to 1.

sive procedure of sending emergency services (24.6%). The interventions were not mutually exclusive in that some form of active rescue and active engagement were implemented together on 35 calls.

On 192 calls (39.1%), the helper indicated that imminent risk was reduced enough by the end of the call that rescue (not to be confused with "active rescue") was not needed. Emergency services were not involved on any of these calls, either with or without the caller's collaboration. Callers collaborated with the helpers on less invasive interventions on 188 (97.9%) of these calls, including nine calls where the caller agreed to transport him/herself or be transported by a third party to a hospital. Noncollaborative interventions (namely, the involvement of a third party without the caller's consent) were implemented on only two calls (1.0%) where risk was reduced enough during the call so that rescue was not needed. On four of the 192 calls (2.1%), none of the interventions listed on our form were endorsed.

Of the 299 calls (60.9%) where the helper did not indicate that imminent risk was reduced enough by the end of the call that rescue was not needed, emergency services were sent on 213 (71.2%). Emergency services were sent collaboratively (i.e., more invasive active engagement) on 94 calls (44.1%) and noncollaboratively (i.e., more invasive active rescue) on 121 calls (56.8%). (On two calls, both collaborative and noncollaborative forms of emergency rescue were implemented.) Of the remaining 86 calls (28.8% of 299), callers collaborated with the helpers on less invasive interventions on 67, including 26 calls where the caller agreed to transport him/herself or be transported by a third party to a hospital. Noncollaborative interventions not involving emergency services (i.e., less invasive active rescues), such as the helper's involving a third party, the Veterans Health Administration, or a mobile crisis team without the caller's collaboration, were implemented on 13 of the 86 calls. On 11 of the 299 calls where imminent risk was

not reduced during the call (3.7%), none of the interventions listed on our form were endorsed.

Emergency Services Sent When an Attempt Was in Progress

Nearly half (47.5%) of the 99 calls with an attempt in progress had an emergency service sent without the caller's collaboration (i.e., a more invasive active rescue). On nearly a third (30.3%) of calls with an attempt in progress, the helpers engaged the callers sufficiently that the callers agreed to have emergency services sent to them. Overall, 76 (76.8%) of the 99 calls with an attempt in progress resulted in any emergency service being sent (one call had both types of more invasive intervention). For 10 calls (10.1% of 99) where the callers had taken some action to kill themselves, the helpers were able to reduce imminent risk enough so that rescue by emergency services was not needed. Of the remaining 13 calls (13.1% of 99) with an attempt in progress, at least one type of less invasive intervention, not involving emergency services, was implemented on 11. For 2 of the 13 calls, none of the interventions listed on our form were endorsed.

Characteristics of Imminent Risk Callers/ Calls

A total of 51.1% calls included in our sample came from female callers, which is a lower percentage of females than is reported for suicidal hotline calls overall (Gould et al., 2007). Overall, the risk profiles of the callers identified as at imminent risk involved high levels of current suicidal desire, particularly in the form of suicidal ideation, hopelessness, and psychological pain, and of suicidal intent in the form of a plan to kill themselves and expressed intent to die (see Total column and footnote of Table 2). Indicators of a caller's suicidal capability were frequently unknown to the helpers, with the notable exceptions of whether the caller had available means and whether the caller was intoxicated. Overall, few buffers were present. However, the protective factor of the caller's engagement with the crisis helper was present on a majority of calls.

Latent Classes of Imminent Risk Callers/ Calls

The Bayesian information criterion indicated that the optimal number of latent classes was four (see Table 2). The most prevalent class [Class I, "high risk (by virtue of their scores on suicidal desire, suicidal intent, suicidal capability, and buffers); moderate-to-high engagement"] contained nearly half of the sample, of whom 46.1% were female. Almost all Class I calls had high scores on almost all indicators of suicidal desire. Over half had either engaged in preparatory behaviors or had an attempt in progress. They had low scores on most buffers. However, high engagement with the helper was present on over two-thirds of these calls.

The next most prevalent class (Class II, "lowest risk; highest engagement") contained 21.4% of the sample, of whom 54.3% were female. This class had the highest proportion of low scores on variables assessing suicidal desire and intent, but, even so, the majority of calls had high scores on these variables. Preparatory behaviors were present on over a quarter of these calls, but attempts in progress were rare. Most striking was its difference from other classes in its overall high rates of buffers, and particularly of reasons for living. High engagement with the crisis helper was near universal, and the proportion of "don't know" response was almost uniformly the lowest among all classes.

Class III ("moderate-to-high risk; lower engagement") contained 18.3% of the sample, of whom 54.4% were female. Almost all displayed high scores on indices of suicidal desire when it could be ascertained (very few low values, but a higher rate of "don't know" responses than for Class I or II). Approximately a quarter had

an attempt in progress, and the proportion of callers who were out of touch with reality was the highest among the four classes. Few had high reasons for living. Although the majority of these calls showed high engagement with the helper, the proportion of calls with high engagement was comparatively low.

Class IV ("highest risk; lowest engagement") is the smallest, containing only 11% of calls, of which 62.3% were from female callers. These calls were characterized by "don't know" responses on many of the risk and protective factors assessed on the form (e.g., over 75% had "don't know" responses for the majority of indicators of suicidal desire). However, almost all had high scores on expressed intent to die, and this class had the highest rate of suicide attempts in progress. These calls showed the lowest engagement with the helper among the four classes.

The individual items from each of the four IPTS facets that were most strongly associated with latent class membership and had sufficient prevalence of both yes/high and no/low responses were reasons for dying (for suicidal desire), preparatory behavior/attempt in progress (for suicidal intent), current intoxication (for suicidal capability), and sense of purpose (for buffers). Neither the caller's gender, crisis center, nor helper characteristics were associated with latent class membership.

Relationship between Interventions and Caller Characteristics

Active Engagement. Latent class membership was significantly associated with active engagement (see Table 3). Specifically, Class II was significantly more likely than classes I, III, or IV to actively engage with the helper ($OR_{II,I}$ = 4.49, 95% CI = 1.96–10.26; $OR_{II,III}$ = 6.18, 95% CI = 2.52–15.16; $OR_{II,IV}$ = 8.92, 95% CI = 3.26–22.73). Results of univariate analyses using the four individual IPTS items are presented in Table 3. In the multivariate model containing the four individual IPTS items as independent variables, three of the four items remained significantly associated with active engagement: an attempt in progress (adjusted OR 0.29, 95%CI = 0.16–0.52), current intoxication (adjusted OR = 0.48, 95%CI = 0.27–0.86), and a sense of purpose (adjusted OR = 5.68, 95% CI = 1.90–16.95). When engagement with the helper was added to the multivariate model, the associations with reasons for dying, attempt in progress, current intoxication, and engagement with the helper remained significant. The caller's gender was not associated with active engagement.

Active Rescue. Latent class membership was significantly associated with the implementation of an active rescue intervention. Specifically, odds of an active rescue intervention were significantly lower on calls in Class II than in classes I, III, or IV ($OR_{II,I}$ = 0.19, 95% CI = 0.09–0.41; $OR_{II,III}$ = 0.19, 95% CI = 0.08–0.44; $OR_{II,IV}$ = 0.19, 95% CI = 0.07–0.42). In the multivariate model containing the four individual IPTS items, only an attempt in progress (adjusted OR = 3.39, 95% CI = 2.00–5.71) and a caller's sense of purpose (adjusted OR = 0.19, 95% CI = 0.07–0.48) remained significantly associated with the implementation of an active rescue. When engagement with the helper was added to the multivariate model, attempt in progress, sense of purpose, and engagement with the helper remained significantly related to active rescue. The caller's gender was not associated with the implementation of active rescue.

Imminent Risk Reduced Enough so Rescue Not Needed. Latent class membership was significantly associated with the reduction in imminent risk during the crisis call. Specifically, calls in Class II had significantly greater odds than those in classes I, III, or IV of having imminent risk reduced enough during the call so that rescue was not needed ($OR_{II,I}$ = 6.04, 95% CI = 3.33–10.96; $OR_{II,III}$ = 12.68, 95% CI = 5.96–26.96; $OR_{II,IV}$ = 27.78, 95%

CI = 10.10–76.92). Additionally, calls in Class I had significantly greater odds than those in classes III and IV of having imminent risk reduced during the call ($OR_{I, III}$ = 2.10, 95% CI = 1.09–4.03; $OR_{I,IV}$ = 4.55, 95% CI = 1.79–11.49). All four individual IPTS items remained significantly associated with reduced imminent risk in the multivariate model (reasons for dying adjusted OR = 0.32, 95%, CI = 0.13–0.60; attempt in progress adjusted OR = 0.12, 95%CI = 0.05–0.29; current intoxication adjusted OR = 0.52, 95%, CI = 0.29–0.94; sense of purpose adjusted OR = 5.35, 95% CI = 2.58–10.99). Moreover, when engagement with the helper was added to the model, all five factors significantly predicted the outcome. The caller's gender was not associated with the reduction in imminent risk during the call without emergency rescue.

Relationship between Interventions and Helper Characteristics

Few helper characteristics were significantly associated with the interventions implemented on imminent risk calls (see Table 4). Only volunteer status and the number of hours per week a helper spent answering calls were associated with the implementation of active engagement and active rescue interventions. The odds of a volunteer actively engaging an imminent risk caller in a collaborative intervention were 59% less than for nonvolunteers; the odds of a volunteer implementing a noncollaborative active rescue were 2.3 times higher than for nonvolunteers. For each additional hour per week a helper spent answering calls, the odds for actively engaging an imminent risk caller were 2% higher, and the odds of undertaking an active rescue were 2% lower. The number of hours answering calls per week was also significantly associated with imminent risk being reduced by the end of the call so that rescue was not needed (a 2% higher odds for each additional hour). For each additional shift of 4 hours per week answering calls, therefore, the helper would have an 8% higher odds of collaboratively engaging the caller, an 8% lower odds of implementing a noncollaborative active rescue, and an 8% increased odds of reducing the caller's imminent risk by the end of the call so that rescue was not needed.

In light of the significant impact of a helper's volunteer status on two of our primary outcomes, we examined the relationship between a helper's volunteer status and the other helper characteristics we assessed. Volunteers differed from nonvolunteers in many respects [e.g., volunteers had less education (p = .04), were less likely to be licensed clinicians/mental health professionals (p = .0002), were less likely to have completed ASIST training (p = .04), and had worked as crisis helpers for fewer years (p < .0001)]; however, with the exception of the average number of hours answering calls per week [6.6 hours/week (volunteers) vs. 28.5 hours/week (nonvolunteers), p < .0001], these differences appeared to be unrelated to the impact of volunteer status on our outcomes. It was not possible to examine the independent contributions to our outcomes of volunteer status and number of hours answering calls because the two factors were associated to such a degree that their effects were confounded.

DISCUSSION

Crisis helpers actively obtained the collaboration of the vast majority of callers they identified as being at imminent risk, consistent with the Lifeline IR policy. On a quarter of the imminent risk calls, the helper undertook an active rescue, intervening without the caller's collaboration. Active rescues were largely limited to calls where callers expressed many or strong reasons for dying and had little sense of purpose in their lives; an attempt in progress, a caller's being intoxicated at the time of the call, and a low level of engagement with the helper also markedly increased the odds of active rescue. In addition, emergency ser-

vices were sent *with* the caller's collaboration on 19.1% of imminent risk calls. Overall, 76.8% of the calls with an attempt in progress resulted in an emergency service being sent, in contrast to the rate of 37.9% reported in our earlier study (Gould et al., 2007) prior to the Lifeline IR policy.

Our findings suggest that all imminent risk calls do not fit a single type. Instead, four distinct profiles emerged from calls on which Lifeline helpers across the eight centers in our study believed imminent risk to be present. Class I consisted of high-risk calls with a moderate-to-high rate of engagement with the crisis helper. Class II consisted of relatively low-risk calls with high engagement with the crisis helper; however, it should be noted that risk was low for this group not in absolute terms but only in comparison with the other three classes of imminent risk calls. Class III consisted of moderate-to-high-risk calls with a moderate amount of missing information due to modest engagement with the crisis helper. Class IV consisted of very high-risk calls (based on known values; i.e., the proportion of yes/high to no/low values), with a large amount of missing information due to low engagement with the crisis helper. The four risk profiles were significantly associated with the type of intervention implemented during the call, including whether or not the caller collaborated on securing his/her own safety, whether or not the helper initiated an active (i.e., noncollaborative) rescue, and whether or not the helper was able to reduce the caller's imminent risk without involving emergency services. The lowest risk call profile (Class II) was significantly different from the three higher risk profiles in relation to all three of our intervention outcomes. In addition, Class I was significantly different from classes III and IV in relation to the odds that imminent risk was reduced during the call without emergency service involvement. The key to this difference appears to be the higher level of engagement with the helper on the former call type (Class I) than on the latter (classes III and IV).

Across the four latent classes of imminent risk callers, the levels of "don't know" responses were higher in classes where the levels of engagement with the helper were low. It would seem that lack of engagement hampers helpers' ability to gather detailed information about callers' suicide risk. Additionally, the levels of "don't know" responses were significantly higher when attempts were in progress [e.g., the odds of having "don't know" responses for the IPTS items reasons for dying, current intoxication, and sense of purpose were 4.35 (95%CI: 2.17–8.74), 1.87 (95%CI: 1.07–3.27), and 1.90 (95%CI: 1.08–3.36) greater, respectively, if an attempt was in progress]. Once critical indicators of imminent suicide risk have been identified, helpers may feel the need to intervene and therefore may shift from assessment to intervention without assessing the caller's risk in greater detail. Of particular concern, however, were the high levels of missing information related to suicidal capability across the whole sample. Despite Lifeline guidance that a history of prior suicide attempts be assessed on all calls (Joiner et al., 2007), this important risk factor for completed suicide was unknown on nearly 40% of imminent risk calls. It may be that questions about capability are harder to work into a discussion of the suicidal person's immediate concerns; more training may be needed to underscore the importance of assessing all four facets of suicide risk and to model sensitive ways of gathering information related to suicidal capability in particular.

When the individual caller characteristics of reasons for dying, attempt in progress, current intoxication, and sense of purpose (representative of IPTS facets of suicidal desire, suicidal intent, suicidal capability, and buffers, respectively) were examined in a combined model, all four IPTS items were shown to be associated independently with at least one of our intervention outcomes. High levels of reasons for dying independently yielded lower odds that the caller's risk would be reduced without

recourse to emergency services. An attempt in progress independently yielded lower odds of the caller's risk being reduced without emergency rescue, lower odds of the caller's active engagement in a collaborative intervention, and higher odds of active (involuntary) rescue. Current intoxication independently yielded lower odds both of the caller's risk being reduced without emergency rescue and of an active engagement intervention. A caller's sense of purpose independently yielded increased odds that the caller's risk would be reduced without emergency rescue, higher odds of active engagement, and lower odds of active rescue. Whereas the Lifeline's risk assessment model discounts the impact of buffers in cases where suicidal desire, intent, and capability are all present, it appears that in helpers' actual practice the presence of buffers influences the outcomes of even these high-risk calls. Finally, our finding that a caller's level of engagement with the helper was independently associated with all of our outcomes provides support for the Lifeline policy's emphasis on developing "good contact" and promoting active engagement with all callers, including those at imminent risk (Draper et al., 2015; Mishara et al., 2007a). Successfully establishing a collaborative relationship with callers appears to enhance helpers' chances of mitigating imminent suicide risk through collaborative interventions, and to reduce the need to involve emergency services, even in the presence of robust indicators of suicidal desire, capability, and intent.

Contrary to our expectations, we did not find an effect of helper training in ASIST or other Safety Planning protocols on the types of interventions implemented with imminent risk callers. It may be that these two types of training, in combination with Lifeline centers' standard training programs, have comparable effects on helpers' handling of imminent risk calls and that these effects were not detectable in our sample due to helpers' near-universal exposure to one or the other type of training. Also contrary to our expectations, we did not find an effect of helpers' experience providing long-term follow-up to suicidal callers. It appears that a helper's decision about how to intervene with an imminent risk caller may necessarily be based on conditions present in the short term. The relevance of follow-up to securing callers' immediate safety is reinforced, however, by our finding that 28.9% of imminent risk callers agreed to receive some form of follow-up from the centers, including 49% of those whose imminent risk was reduced without the use of emergency rescue.

We did find an effect on our outcomes of the average hours per week spent answering calls, in that the more hours per week helpers answered crisis calls, the less likely they were to implement active (involuntary) rescues, the more likely they were to actively engage the callers in the interventions, and the more likely they were to reduce imminent risk over the course of the call without emergency rescue. More hours per week answering calls may lead to greater familiarity with and exposure to high-risk situations, which may in turn lead to more confidence handling imminent risk, a wider repertoire of intervention strategies, and a reduced tendency to initiate rescue as a first resort. Our data cannot tell us whether refraining from rescue is always the best course or whether helpers with high levels of familiarity and exposure may sometimes become too comfortable with suicide risk or too slow to initiate rescue in instances where it is called for. However, the fact that callers agreed to collaborate on less invasive interventions on nearly all calls where helpers deemed that rescue was not needed suggests that these helpers are in fact finding alternative ways to manage high levels of risk, rather than leaving that risk insufficiently addressed.

We also found an effect of a helper's volunteer status on higher rates of active rescue, and lower rates of active engagement, which may be a function of the significantly fewer hours per week that volunteers spend answering crisis lines (6.6 hours/week on average) compared to

paid staff (28.5 hours/week on average). Other factors that differentiated volunteers from nonvolunteers in our sample, such as clinical licensure, training in Safety Planning and ASIST, and responsibility for conducting follow-up calls, were unrelated to our outcomes and thus do not seem to account for the impact of volunteer status on the type of intervention used. As might be expected, helpers who answered crisis lines 6 hours or less per week encountered significantly fewer imminent risk calls over the data collection period than helpers who answered crisis lines more than 6 hours per week, as estimated by the number of forms they completed for our study [an average of 1.18 (SD = 1.55) and 4.96 (SD = 5.42), respectively, $p < .0001$]. Our findings related to the impact of the number of hours per week spent answering calls on the types of interventions implemented, particularly in the context of the low average number of hours per week worked by volunteers, may have practical implications for shift assignments at crisis centers and for minimum time commitments required for crisis hotline work.

There are several limitations of the current study. Given their imminent suicide risk, there was no ethical or feasible way for us to obtain callers' consent for study participation, including participation in a follow-up assessment. Therefore, all of our data were de-identified, based on helper self-report, and limited to the single time point of the crisis intervention. We relied on the crisis helpers' clinical judgment as to who was at imminent risk. We have no way of assessing whether the helpers were correct in their assessment of the callers' risk or whether the interventions they chose were the most appropriate or effective ones. Nevertheless, the snapshot we are able to provide of the ways imminent risk is defined and acted upon at crisis centers across the United States provides an unprecedented amount of systematic data about this critically important and little studied topic.

In conclusion, Lifeline crisis helpers are at the forefront of crisis interventions with individuals at imminent risk of suicide who are at least ambivalent enough to reach out for help. Their experience has much to teach other providers of services to suicidal individuals. Helpers at the eight centers in our study appear to be adhering to Lifeline's policy for helping callers at imminent risk of suicide. They are assessing suicide risk according to the four-factor model derived from the IPTS (Joiner, 2005; Joiner et al., 2007) and tailoring their interventions to the caller's level of risk. They are working to actively engage with imminently suicidal callers and to secure their collaboration on interventions to secure safety, with the result that high levels of caller engagement were secured on over 75% of imminent risk calls. In the event that risk is not sufficiently reduced over the course of the telephone crisis intervention, helpers are proactively involving emergency services, both with and, when necessary, without the collaboration of the caller. Room for improvement exists, however, in the need to reduce the levels of missing information about callers' risk status, particularly in regard to suicidal capability, and in the need to standardize intervention approaches across helpers who answer calls full-time, part-time, and on occasional shifts. Future evaluation efforts will focus on centers' efforts to develop and utilize collaborative relationships with other community services, such as 911 communications centers, as recommended by the Lifeline to enhance the continuity of care and safety for callers at imminent risk (Draper et al., 2015). Future evaluations may thus be able to provide valuable insight into the outcomes of rescue interventions implemented during imminent risk calls.

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