



## The Collaborative Assessment and Management of Suicidality (CAMS): An Evolving Evidence-Based Clinical Approach to Suicidal Risk

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The Collaborative Assessment and Management of Suicidality (CAMS) is an evidence-based clinical intervention that has significantly evolved over 25 years of clinical research. CAMS is best understood as a therapeutic framework that emphasizes a unique collaborative assessment and treatment planning process between the suicidal patient and clinician. This process is designed to enhance the therapeutic alliance and increase treatment motivation in the suicidal patient. Central to the CAMS approach is the use of the Suicide Status Form (SSF), which is a multipurpose clinical assessment, treatment planning, tracking, and outcome tool. The original development of CAMS was largely rooted in SSF-based quantitative and qualitative assessment of suicidal risk. As this line of research progressed, CAMS emerged as a problem-focused clinical intervention that is designed to target and treat suicidal “drivers” and ultimately eliminate suicidal coping. To date, CAMS (and the clinical use of the SSF) has been supported by six published correlational studies and one randomized clinical trial (RCT). Currently, two well-powered RCTs are under way, and various new CAMS-related projects are also being pursued. The clinical and empirical evolution of CAMS—how it was developed and what are the next steps for this clinical approach—are described here.

### OVERVIEW

Contemporary clinical care of suicidal patients poses numerous challenges. Indeed, it has been argued elsewhere that these various challenges pose certain professional (even ethical) concerns and risks for many mental health professionals (Jobes, Rudd,

Overholser, & Joiner, 2008). Among the contemporary concerns are the potential inadequate use of informed consent, insufficient clinical assessments of suicidal risk, clinicians not using evidence-based interventions, and significant misunderstandings about risk management and potential malpractice liability. While some progress has clearly been made in the past 25 years, and future developments hold promise (Comtois, 2012; National Action Alliance: Clinical Care & Intervention Task Force, 2011), continued concerns about problematic practices persist. Such practices might include a failure to even ask a patient about their suicide risk, the continued and pervasive use of coercive “no-harm” contracts, an over reliance and potentially ineffectual use of very brief inpatient hospitalizations, an over reliance on a

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medication-only approach to treatment, and insufficient clinical documentation with implications for malpractice liability therein (Jobes & Berman, 1993; Jobes et al., 2008). Given the pervasiveness of suicidal presentations in clinical practice—and the potential life or death implications—it is perhaps still surprising that the empirical research literature on clinical assessment, treatment, and risk management of suicidal patients is not significantly more evolved than it is (Schoenbaum, Heinssen, & Pearson, 2009).

Given these considerations, the Collaborative Assessment and Management of Suicidality (CAMS) was developed by the author to at least partially address many of the above-noted concerns and challenges. While it would be naïve to suggest that one clinical approach is the remedy for all the challenges faced in the clinical care of suicidal patients, the evolving 25-year development of the Suicide Status Form (SSF) and the related evolution of the CAMS approach to suicidal risk has demonstrated practical utility as well as empirical support. This article is thus intended to trace the evolution of CAMS-related research over the past 25 years by highlighting the major conceptual themes, research highlights, and clinical insights, as well as and current and future next steps for CAMS as an evolving evidence-based clinical approach to suicidal risk.

#### SSF ASSESSMENT RESEARCH

As a clinical intervention, CAMS is assessment-heavy because I believe that effective clinical treatment and elimination of suicidal risk *requires* that a patient's suicidal risk be thoroughly understood. Within CAMS, there is a fundamental assumption that it is essential for the suicidal patient to actually *feel* well understood; like others in the field, I embrace the notion of “therapeutic assessment” (e.g., Finn, 2007). Thus, all CAMS-based assessments emphasize empathy, respect, a shared curiosity with the patient, and the importance of carefully and

sensitively unpacking the patient's inner suicidal struggle in a collaborative and supportive manner. The assessment constructs of collaboration, empathy with the suicidal wish, and understanding the patient's inner suicidal narrative are not unique to CAMS, but to be sure these are cardinal principles of the approach. Various clinicians who embrace the “Aeschi Approach” to suicide have similarly rallied around many of these ideas as a meaningful alternative to clinical approaches that are commonly seen in contemporary practice that are too often judgmental, shaming, coercive, controlling, or reductionist (for more on the Aeschi Approach to suicidal risk, refer to Michel & Jobes, 2011).

Beyond these aspirational assessment principles, CAMS relies on the collaborative completion of certain sections of the previously mentioned SSF. As described in depth elsewhere (Jobes, 2006), the SSF is a seven-page multipurpose assessment, treatment planning, tracking, clinical outcome tool that serves as a road map to guide the CAMS approach (and is one of the most widely used suicide assessment tools in contemporary practice—refer to Range, 2005). Within CAMS, the index session use of the SSF includes completion of three pages to initially assess, treatment plan, and document various aspects of the patient's suicidal risk and clinical care (once this is done, the patient is administratively designated as being on “Suicide Status”). Once a CAMS patient is so engaged and identified, additional SSF pages are used repeatedly to further assess, track, treatment plan update, and document key aspects of CAMS care in each subsequent Suicide Status tracking session. When criteria for Suicide Status resolution are met (three consecutive sessions where suicidal coping is essentially eliminated, or other clinical outcomes occur), final SSF outcome pages are used to document the end of CAMS care and the disposition of the case. Various electronic versions of the SSF are being developed, which may displace the hard copy use of the SSF. In the meantime, CAMS clinicians use the hard copy of the

SSF, which can then be scanned into an electronic medical record.

In deference to survey data on clinical assessment practices (Jobes, Eyman, & Yufit, 1995), the SSF was purposely designed to be a different kind of assessment tool altogether. Unlike many assessment tools in the extant literature that are test-constructed largely through reductionist multivariate analyses, the key constructs of the SSF-based assessment were derived from the theoretical, clinical, and empirical work of Shneidman (1993); Beck, Rush, Shaw, and Emery (1979); Baumeister (1990); Linehan, Goodstein, Nielsen, and Chiles (1983); and Jobes (1995, 2000, 2006). Moreover, beyond its theoretically/clinically derived basis, the SSF is also unique among suicide assessment tools in that it uses both quantitative rating scales and qualitative open-ended assessment items to access different aspects of the suicidal struggle (for an example of the first page of the SSF, see Figure 1).

#### *SSF Quantitative Assessment*

The assessment heart of the SSF is referred to as the SSF Core Assessment, which includes rating scales (1–5) of the six following constructs: Psychological Pain, Stress, Agitation, Hopelessness, Self-Hate, and Overall Risk of Suicide. As previously noted, while these constructs were derived from clinically valuable theories of Drs. Shneidman, Beck, and Baumeister, there was, nevertheless, a clear need to empirically investigate and understand the psychometric validity and reliability of this core assessment. To this end, two rigorous psychometric studies of the SSF Core Assessment were conducted, one with an outpatient sample of treatment-seeking suicidal college students (Jobes, Jacoby, Cimboric, & Hustead, 1997) and a second with a much higher risk and more diverse inpatient psychiatric sample (Conrad et al., 2009). In the first study, Jobes et al. were able to demonstrate that the six SSF Core Assessment variables functioned quasi-independently of each other and that the variables were both valid (good to excel-

lent convergent and criteria-prediction validity) and reliable (significant test/re-test reliability). These psychometric validity and reliability results were further replicated and extended through an even more rigorous design in the Conrad et al. study. In comparison with the first study, the second study factor analytic results showed a marked increase in describing total variance using the SSF Core Assessment variables (from a total variance of 36% in the 1997 study to a robust two-factor solution that accounted for 72% total variance in the 2009 replication study).

While establishing the validity and reliability of the SSF Core Assessment was essential, there have also been a number of additional quantitative studies using the SSF as an assessment tool. For example, one early study (Eddins & Jobes, 1994) investigated the similarities and differences in how suicidal patients and their clinicians independently view and rate these constructs (as an aside, the data from this study later prompted the collaborative completion of these rating scales when CAMS was developed some years later). Other early studies used the first session (index) ratings of the SSF Core Assessment constructs to both describe (Jobes, 1995) and differentially predict categorical treatment outcomes (Jobes et al., 1997). Similarly, onetime first session ratings of the SSF Core variables in a later counseling center study were used to predict significantly different reductions in suicidal ideation over the course of treatment as well as the moderating effects of certain SSF variables using hierarchical linear modeling (HLM) analyses (Jobes, Kahn-Greene, Greene, & Goetze-Morey, 2009). In terms of specific findings, this study showed that suicidal patients' onetime first session SSF rating of Overall Risk of Suicide differentially predicted four distinct linear reductions in suicidal thinking over the course of care. In a second level of HLM analysis of the remaining SSF variables, first session ratings of SSF constructs of Hopelessness and Self-Hate significantly moderated the effect of the Overall Risk of Suicide rating. Finally,

**Suicide Status Form-SSF II-R (Initial Session)**

Patient: ~~XXXXXXXXXX~~ Clinician: ~~XXXXXXXXXX~~ Date: ~~XXXX/XX/XX~~ Time: ~~XXXX:XX~~

**Section A (Patient):**

Rate and fill out each item according to how you feel right now.  
 Rank Then rank in order of importance 1 to 5 (1=most important to 5=least important).

2	1) RATE PSYCHOLOGICAL PAIN ( <i>hurt, anguish, or misery in your mind, <u>not</u> stress, <u>not</u> physical pain</i> ): What I find most painful is: <u>I'm such a loser</u> Low pain: 1 2 3 4 5 (5) :High pain
4	2) RATE STRESS ( <i>your general feeling of being pressured or overwhelmed</i> ): What I find most stressful is: <u>crap from my boss</u> Low stress: 1 2 3 4 5 (4) :High stress
5	3) RATE AGITATION ( <i>emotional urgency; feeling that you need to take action; <u>not</u> irritation; <u>not</u> annoyance</i> ): I most need to take action when: <u>I get drunk and angry</u> Low agitation: 1 2 3 4 5 (5) :High agitation
1	4) RATE HOPELESSNESS ( <i>your expectation that things will not get better no matter what you do</i> ): I am most hopeless about: <u>ever having a girlfriend</u> Low hopelessness: 1 2 3 4 5 (5) :High hopelessness
3	5) RATE SELF-HATE ( <i>your general feeling of disliking yourself; having no self-esteem; having no self-respect</i> ): What I hate most about myself is: <u>I'm ugly</u> Low self-hate: 1 2 3 4 5 (5) :High self-hate
N/A	6) RATE OVERALL RISK OF SUICIDE: Extremely low risk (will not kill self) 1 2 3 4 5 (3) :Extremely high risk (will kill self)

1) How much is being suicidal related to thoughts and feelings about yourself? Not at all: 1 2 3 4 5 (5) : completely  
 2) How much is being suicidal related to thoughts and feelings about others? Not at all: 1 (2) 3 4 5 : completely

Please list your reasons for wanting to live and your reasons for wanting to die. Then rank in order of importance 1 to 5.

Rank	REASONS FOR LIVING	Rank	REASONS FOR DYING
1	My parents	1	I hate myself
3	My sister	5	I'm fat
5	Maybe it could change	3	things never work out
2	my dog	4	others would better off
4	you only live once!	2	stop the misery

I wish to live to the following extent: Not at all: 0 1 2 3 4 5 (5) 6 7 8 : Very much  
 I wish to die to the following extent: Not at all: 0 1 2 3 4 5 (4) 6 7 8 : Very much  
 The one thing that would help me no longer feel suicidal would be: if I could find a way to feel differently about me!

Figure 1. An example of the patient completed first page of the Suicide Status Form. From *Managing Suicidal Risk: A Collaborative Approach* by D. A. Jobes, 2006. Copyright Guilford Press. Reprinted with permission of The Guilford Press.

the SSF Core Assessment has been used as a treatment outcome assessment in various correlational studies of CAMS as a clinical intervention (e.g., Ellis, Green, Allen, Jobes, & Nadorff, 2012).

*SSF Qualitative Assessment*

As previously noted, a unique feature of the SSF is the integration of both quantitative and qualitative assessments of suicidal risk. To this end, the qualitative SSF assessments have revealed important findings about the specific content of suicidal ideation using what we call SSF “micro-coding.” As seen in

Figure 1, the first page of the SSF has three different types of qualitative assessments. The first is an adapted version of Julian Rotter’s (Rotter & Rafferty, 1950) “Incomplete Sentence Blank.” Specifically, for each theoretical construct in the SSF Core Assessment, there is the opportunity for the patient to write in their own words responses to various incomplete sentence prompts. Following the psychological pain rating scale is the following prompt: “What I find most painful is: \_\_\_\_\_.” Following the stress rating is the prompt: “What I find most stressful is: \_\_\_\_\_.” Following the agitation rating is the prompt: “I most need to take action when:

\_\_\_\_\_.” Following the hopelessness rating is the prompt: “I am most hopeless about: \_\_\_\_\_.” Finally, following the self-hate rating is the prompt: “What I hate most about myself is: \_\_\_\_\_.” In this fashion, the suicidal patient literally writes out the musings of the suicidal mind (and further ranks their importance from 1 to 5). There is often a perseverative quality to these written responses; many of the same problems and issues appear across the SSF prompts. Over the years, our research team has used an adapted version of “Consensual Validation” (Hill, Thompson, & Williams, 1997) to develop highly reliable coding systems to organize such responses into content themes (Jobes, Nelson, Peterson, Pentiu, Downing, Francini, 2004). In this 2004 study, 12 different SSF suicide-related content themes were identified: Self, Relational, Role Responsibility, Global/General, Helpless, Unpleasant Internal States, Unsure/Unable to Articulate, Situation-Specific, Compelled to Act, Future, Internal Descriptors, and External Descriptors. Interestingly, in a fairly large combined sample of suicidal treatment seekers who completed the SSF ( $n = 152$ ), 4 of the 12 SSF suicide-related content themes captured 67% of the 636 total written qualitative responses across these prompts. In terms of percentages, the written SSF suicidal content was primarily captured by the following four themes: Relational (22%), Role Responsibility (20%), Self (15%), and Unpleasant Internal States (10%). In other words, these data suggest that the suicidal struggle seems to be dominated by relational, vocational, and self-oriented issues. But these findings were somewhat surprising in that the larger literature in suicide prevention is clearly dominated by a major focus on what Jobes et al. code as Unpleasant Internal States (e.g., symptoms of psychopathology and mental disorders), which made up only 10% of the total suicide-related SSF qualitative responses.

The second major SSF qualitative assessment is called the Reasons for Living (RFL) versus Reasons for Dying (RFD) Assessment. In this assessment, the suicidal patient is given the opportunity to list up to

five RFLs and five RFDs respectively in spaces provided on the SSF (and rank each in order of importance from 1 to 5). Our research team has similarly developed a highly reliable coding system to capture and organize these responses (Jobes & Mann, 1999). This reliable coding system captures nine different RFL response themes: Family, Friends, Responsibility to Others, Burdening Others, Plans and Goals, Hopefulness for the Future, Enjoyable Things, Beliefs, and Self. In turn, there are nine reliable RFD-type responses: Relationships, Unburdening Others, Loneliness, Hopelessness, General Descriptors of Self, Escape in General, Escape the Past, Escape the Pain, and Escape Responsibilities. This assessment often captures the inherent internal psychological battle of the suicidal mind; suicidal patients invariably struggle within a psychological tug-of-war between living and dying. In a most transparent way, the RFL/RFD assessment usefully reveals the “Internal Struggle Hypothesis” first posited by Kovacs and Beck (1977) and provides a different kind of assessment particularly in contrast to examining either RFL or RFD in a disconnected manner (refer to Jobes & Mann, 2000). As a general matter, this assessment has shown both the pervasiveness of RFLs among suicidal patients and the marked need for escape as a common reason for dying (Jobes & Mann, 1999). The SSF RFL/RFD assessment approach has been applied to additional studies in the field as well (e.g., Harris, McLean, Sheffield, & Jobes, 2010) as a means of examining the ambivalent nature of suicidal states.

As described elsewhere (Jobes, 2006), an intriguing RFL-related study (with distinct implications for assessment and treatment) was conducted using only the SSF Reasons of Living responses of 201 suicidal college students who were seen in three different university counseling centers. In this study, an introductory psychology pool of 201 nonsuicidal undergraduate students was also recruited and similarly prompted using the SSF RFL assessment. Two distinct findings emerged. First, in terms of sheer



frequency counts, the introductory psychology pool student sample had more total RFL responses than the clinical sample (1,004 compared to 598). Second, the percentage responses were significantly different between groups in that the suicidal clinical sample endorsed RFLs focusing on coding themes of Family, Burdening Others, and Enjoyable Things. In contrast, the subject pool students' RFL responses were significantly more focused on the coding themes of Hopefulness for the Future, Plans and Goals, and Beliefs. In other words, the nonsuicidal sample had markedly more total RFL responses that were focused on *aspirational* and *inspirational* themes of hope, future, plans, goals, and beliefs when compared to the RFLs of the suicidal sample. While there are obvious limitations to this kind of research, it does perhaps reflect an inability of a suicidal person to protectively think about the future and harbor hope that might help them weather the difficult times in their life (refer to the work of O'Connor, O'Connor, O'Connor, Smallwood, & Miles, 2004).

A third and final qualitative assessment opportunity on the first page of the SSF is referred to as the SFF "One Thing" response (i.e., "The one thing that would help me no longer feel suicidal would be: \_\_\_\_\_"). Similar to the preceding SSF qualitative assessments, the patient writes-in their own response to this prompt on the SSF. As described elsewhere (Jobes, 2006), the original SSF One Thing coding system reliably organized responses into Self versus Relational, Realistic versus Unrealistic, and Clinically Useful versus Not Clinically Useful. However, a new reliable coding system for the SSF One Thing has recently been developed (Kulish, Jobes, & Lineberry, 2012). This new system now reliably organizes such responses into the eight following categories: Specific Intimate Relationships, General Social Relationships, Economic/Professional/Academic Stability, External Intervention, Internal Intervention, No Desire to Live, Not Suicidal, and No Answer. This new coding system provides more coding complexity and more detailed

information to further inform assessment and treatment.

A final consideration pertaining to SSF qualitative assessment research is a relatively new macro-coding approach that considers SSF qualitative responses from a larger organizing perspective (Jobes, Stone, Wagner, Conrad, & Lineberry, 2010). For example, our research team has reliably coded the entire first page of all SSF qualitative responses taken together into two major suicidal orientations—Self versus Relational. We have similarly reliably coded only the RFL/RFD assessment into three different suicidal motivations—Life Motivation (frequencies of RFL > RFD) versus Ambivalent Motivation (frequencies of RFL = RFD) versus Death Motivation (frequencies of RFL < RFD). Organizing SSF qualitative responses into these broader coding superordinate themes has enabled us to reliably differentiate a cross-sectional sample of suicidal inpatients showing significant between-group differences on standardized assessment tools and in relation to suicide attempt history (Jobes, Stone, Wagner, Conrad, & Lineberry, 2010). Moreover, organizing samples of suicidal outpatients into three distinct groups by macro-coding first session RFL/RFD responses also differentially predicts longitudinal outcomes related to outpatient mental health treatment (Jennings, Jobes, O'Connor, & Comtois, 2012).

### THE DEVELOPMENT OF CAMS

Fifteen years of SSF-based quantitative and qualitative clinical research provided a great deal of valuable data about the nature of the suicidal mind, particularly within clinical practice. Upon reflection, the actual development of the CAMS initially began as simply a particular way of administering the SSF, but it soon evolved into an actual clinical intervention. In turn, as CAMS evolved as a clinical intervention, the assessment-oriented version of the early SSF evolved and morphed into a more complex multipurpose clinical assessment, treatment planning, risk

tracking, and outcome tool, which ultimately became the basic roadmap of the CAMS clinical approach (Jobes, 2006).

The CAMS approach also evolved out of fundamental clinical needs. When CAMS was first developed, it was plain that a flexible, adaptable, readily trainable approach was compelling. As noted at the outset of this article, there are numerous clinical challenges related to working with suicidal patients that the emerging CAMS approach was designed to address. Specifically, CAMS was conceived as an approach that could ensure a thorough clinical assessment of suicidal risk as well as the development of a suicide-specific treatment plan. Moreover, CAMS was further designed to track ongoing risk while the causes of suicidal risk are being targeted and treated with problem-focused interventions. It was also deemed important to create a documentation trail and a means of structuring a clear beginning, middle, and end of suicide-specific clinical care. Such documentation is both critical to good clinical practice as well as decreasing the prospect of malpractice wrongful death litigation if a suicide should occur. Finally, a clinical intervention that emphasizes the alliance, the importance of motivating the patient, and endeavoring to keep a suicidal person out of inpatient care (if at all possible) just made intuitive and practical clinical sense.

While there were fits and starts in our initial efforts to clinically roll-out CAMS and conduct clinical research in “real world” treatment environments (refer to Jobes, Bryan, & Neal-Walden, 2009), our clinical research of CAMS ultimately evolved and matured. The effectiveness-oriented research of CAMS to date has thus helped to meaningfully evolve CAMS as an intervention as we have learned what works and what does not work (Jobes, Comtois, Brenner, & Gutierrez, 2011). Moreover, we discovered within our feasibility research that CAMS is a bit of an outlier in terms of existing conventional models of clinical care for suicide. Our feasibility work eventually made clear that CAMS is not a new psychotherapy. Rather, the emergent CAMS approach was

better understood as a suicide-specific *therapeutic framework* that is used until suicidal coping is essentially eliminated. Moreover, adherence to CAMS requires a thorough SSF-based suicide risk assessment and suicide problem-focused interventions that are fundamentally designed to target and treat so-called direct and indirect drivers of suicidality. Finally, we realized that CAMS is both a therapeutic philosophy (emphasizing collaboration, empathy, and an unabashed suicide-focus) and a clinical framework that is guided by the clinical use of the SSF (which endeavors to stabilize the suicidal patient using a Crisis Response Plan while identifying, targeting, and treating the drivers of suicidal risk with problem-focused interventions). Taken together, these ideas are now embodied in the CAMS Rating Scale that is used to rate adherence to CAMS care (Comtois et al., 2011). What follows is a brief review of the correlational support for CAMS to date.

#### *Correlational Studies of CAMS*

As shown in Table 1, there are now six published correlational studies investigating the effectiveness of CAMS in a variety of clinical settings with different samples of suicidal patients. For example, there are now two published studies using different research methodologies with suicidal college students that have shown significant pre/post within-group differences using the SSF (Jobes et al., 1997), as well as significant CAMS-related reductions in overall symptom distress and suicidal ideation using repeated measures linear analyses (Jobes, Kahn-Greene et al., 2009). The potential cross-cultural impact of CAMS has been demonstrated in two published within-group pre/post studies with suicidal outpatients in Danish community mental health care outpatient settings (Arkov, Rosenbaum, Christiansen, Jonsson, & Munchow, 2008; Nielsen, Alberdi, & Rosenbaum, 2011). Even though CAMS was specifically developed as an outpatient intervention, this original intent has not precluded the adaptation and

**TABLE 1**  
*Correlational Support for Collaborative Assessment and Management of Suicidality*

Authors	Sample/setting	<i>n</i>	Significant results
Jobes et al. (1997)	College students University counseling center	106	Pre/post overall distress Pre/post SSF Core
Jobes et al. (2005)	Air Force personnel Outpatient clinic	56	Between-group Differences in ideation Differences in ED/PC use
Arkov et al. (2008)	Danish outpatients Community mental health clinic	27	Pre/post SSF Core Qualitative support
Jobes, Kahn-Greene, et al. (2009)	College students University counseling center	55	Linear reductions in overall distress Suicidal ideation
Nielsen et al. (2011)	Danish outpatients Community mental health clinic	42	Pre/post SSF Core
Ellis, Green, et al. (2012)	Psychiatric inpatients Inpatient psychiatric hospital	20	Pre/post SSF Core Reductions in suicidal ideation, depression, hopelessness, and suicidal cognitions

SSF, suicide status form; SSF Core = ratings of Psychological Pain, Stress, Agitation, Hopelessness, Self-Hate, and Overall Risk of Suicide.

use of CAMS within an inpatient psychiatric care setting (e.g., Schilling, Harbauer, Andree, & Haas, 2006). To this end, research collaborators at the Menninger Clinic have published articles about the inpatient use of CAMS at the Menninger Clinic (referred to as CAMS-M; Ellis, Allen, Woodson, Frueh, & Jobes, 2010; Ellis, Daza, & Allen, 2012). Furthermore, a within-subjects open trial case-focused design investigating the effectiveness of CAMS within a longer-term inpatient psychiatric stay has now been published (Ellis, Green, et al., 2012).

Finally, CAMS was used naturalistically within two U.S. Air Force outpatient mental health clinics in a nonrandomized case-control study of 55 suicidal Air Force personnel (Jobes, Wong, Conrad, Drozd, & Neal-Walden, 2005). Within a correlational ex-post facto research design, suicidal ideation was reduced significantly more quickly for patients treated by providers using CAMS when compared to a control group of patients treated by providers using treatment as usual (TAU) care. Moreover, using an interrupted time-series analysis, CAMS was significantly correlated with reductions in primary care

appointments and emergency department visits (when compared to TAU). While these correlational data were promising, we could not of course infer a causal impact of CAMS because there was neither randomization nor any formal check of adherence and fidelity, which obviously affected the internal validity of the study. That said, the external validity of this study was high since patients were seen naturalistically—this archival study was conducted retrospective after the care was rendered. In addition, a series of post-hoc statistical analyses were conducted to study a range of possible “third variables” that may have accounted for the study’s significant differences (e.g., medication or provider). These analyses did not change the overall pattern of results showing the superiority of CAMS care.

#### *CAMS and Randomized Clinical Trial Research*

Because causality is a central goal in treatment development scientific research, more recent CAMS research has increasingly focused on using randomized clinical trial



(RCT) designs (Jobes et al., 2011). To this end, a small feasibility-oriented RCT comparing CAMS to enhanced care as usual with a community-based sample of suicidal outpatients was conducted and recently published (Comtois et al., 2011). In this study, 32 suicidal patients were randomly assigned to the respective treatment arms in an outpatient mental health treatment clinic housed in a large urban medical center. Despite limited statistical power, there were a number of statistically significant experimental findings on primary and secondary measures including between-group differences in suicidal ideation, overall symptom distress, and optimism/hope (refer to Figure 2). Importantly, the between-group significant effects of this study were most robust at the most distal assessment point (12 months after the start of treatment), which shows the possible enduring impact of CAMS long after treatment has ended (on average treatment lasted

eight sessions). Finally, CAMS patient satisfaction ratings were significantly higher than control patient ratings; the patients receiving CAMS care demonstrated superior treatment retention in comparison with control patients as well.

While these data were encouraging about the potential causal effectiveness of CAMS, for the intervention to be truly empirically validated requires both a well-powered RCT and a replication of clinical trial results (ideally by an independent lab). Accordingly, there are two well-powered clinical trials currently under way. The first is a RCT conducted by the author and his research team of CAMS versus enhanced care as usual involving 150 suicidal U.S. soldiers at an outpatient military treatment facility. The second major investigation is a Danish study of a well-powered RCT using a parallel group superiority design in which 160 suicide attempters are being randomly

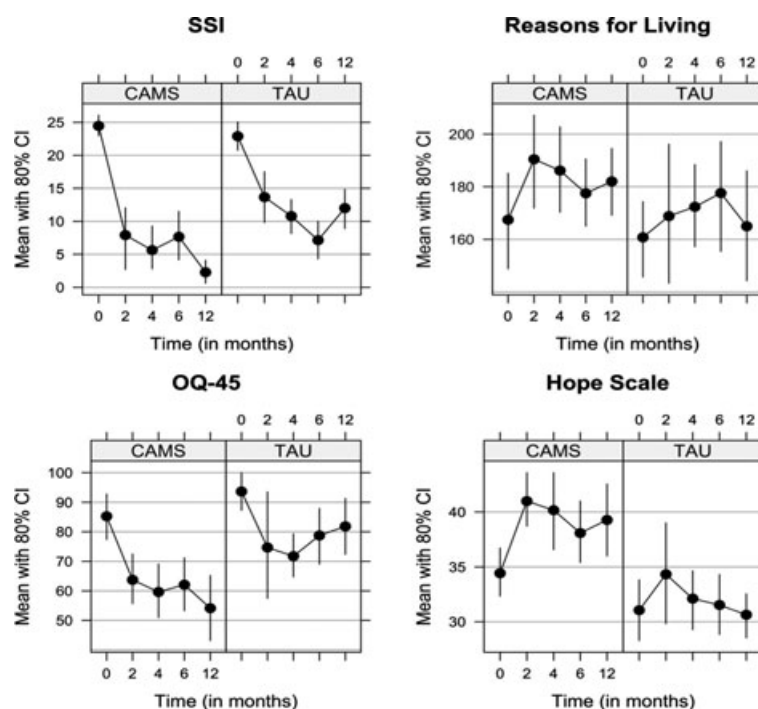


Figure 2. A composite of Collaborative Assessment and Management of Suicidality (CAMS) versus treatment as usual between-group treatment outcomes over 12 months (with confidence intervals) for suicidal ideation (SSI, Scale for Suicide Ideation), reasons for living (Reasons for Living Inventory), overall symptom distress (OQ-45, Outcome Questionnaire-45), and hope/optimism (Optimism and Hope Scale).

assigned to either dialectical behavior therapy or CAMS-informed supportive psychotherapy. These two large RCT studies should thus provide valuable data about the potential cross-cultural effectiveness of CAMS with markedly dissimilar suicidal samples and notably different treatment settings.

### NEXT STEPS FOR CAMS

As described throughout this article, the accumulating empirical support for CAMS has led to its increasing use throughout the United States and overseas. The main source text, *Managing Suicidal Risk: A Collaborative Approach* (Jobes, 2006), has now been translated into Chinese and Korean and other translations are pending. Similarly, the SSF has been translated into German, Spanish, Ukrainian, Danish, and Farsi, and additional translations are being conducted. The accumulating body of clinical and empirical work related to CAMS has led to the writing of various articles and book chapters about the use of CAMS with different suicidal populations such as college students (Jobes & Jennings, 2011), military personnel (Jobes & Drozd, 2004; Jobes, Lento, & Brazaitis, in press), general adult outpatients (Jobes, 2010), and suicidal adult inpatients (Ellis, Daza, et al., 2012).

As noted early on, it would be naïve to suggest that CAMS is *the* clinical solution for working with all suicidal patients in all settings. The approach, nevertheless, appears to enjoy a kind of flexibility and an adaptability that lends it to being used with different suicidal patients and applied within a spectrum of clinical settings. Since CAMS was purposely developed to be a “nondenominational” approach, there is no required theoretical orientation to use and a wide range of cross-theoretical interventions can be imported into this therapeutic framework. In this regard, a number of different uses and adaptations of CAMS and related research are now seen in the professional literature that are independent of the work of the Cath-

olic University Suicide Prevention Lab (e.g., Bryan, 2007; Ellis, Daza, et al., 2012; Pisani, Cross, & Gould, 2011; Zerler, 2009). While a number of CAMS-relevant initiatives are underway, this article will close with a discussion of four current and emerging next-step projects that are emblematic of CAMS-related activities and where CAMS as a clinical intervention is going in the years ahead.

### *CAMS E-Learning Training*

A major consideration with any evidence-based practice for suicide risk is the need for effective clinical training, dissemination, and implementation (Pisani et al., 2011). In this regard, a project undertaken at the Charleston Veterans Affairs (VA) Medical Center is currently under way to test differences in CAMS training conducted live by the author versus CAMS e-learning training provided online with VA mental health clinicians across disciplines. The e-learning version of the CAMS training content includes carefully crafted slides, links to other materials, and embedded video vignettes to make the training interesting and applicable. The data thus far show that CAMS e-learning training is feasible and clinician-ratings of the experience suggest that training in this modality is relatively comparable to the live training experience (De Santis, 2012). Web-based training, consultation, and electronic uses of the SSF and the use of tele-mental health applications of CAMS are definitely a cutting-edge of the approach going forward.

### *CAMS Groups*

Within the extant treatment literature, the use of suicide-specific group therapy is relatively rare. To date, there are now two different versions of CAMS groups being used in VA medical center treatment settings. One model uses a hybrid of an initial individual first session of CAMS with suicidal veterans who are about to be discharged from inpatient care (Johnson, 2012). With successful completion of the initial session,

the patient transitions into the CAMS group as an outpatient along with other similarly discharged veterans; SSF tracking session forms are used in each session at the start of group to assess risk and at the end of group for treatment planning. The assessment aspects of this CAMS group model are currently being investigated in a RCT design. The second model of using a CAMS group has been done with severely mentally ill suicidal veterans in an intensive outpatient treatment program (Jennings, 2012). This CAMS group is somewhat more structured and didactic in nature, but still uses both CAMS philosophy and the SSF to guide the group process. The obvious virtue of these group models is their ability to deliver more suicide-specific care to more patients within a cost-effective treatment modality.

#### *CAMS Intensive Inpatient Care*

Following the work of Ghahramanlou-Holloway, Cox, and Greene (2012) who are investigating an intensive suicide-specific inpatient treatment called “Post Admission Cognitive Therapy,” we are currently exploring the prospect of using an intensive inpatient version of CAMS. In contrast to the Menninger model of CAMS use, which is conducted over a lengthier inpatient psychiatric stay (50–60 days), CAMS intensive inpatient care would occur over perhaps a 5-day hospital stay. In other words, CAMS care would be compressed into an intensive treatment experience where the patient receives CAMS twice a day or once a day for lengthier sessions. In any case, the goal would be an immersion in CAMS-guided suicide-specific care such that the patient would be ultimately discharged after acquiring a new coping skill-set and a postdischarge sense of direction about how to handle their suicidal impulses differently. We are further exploring a hybrid inpatient–outpatient treatment model where a few sessions of CAMS would be initiated on the inpatient unit to stabilize the patient to then “graduate” to postdischarge outpatient individual CAMS care or perhaps a CAMS group (or even both).

#### *CAMS Brief Intervention*

Finally, inspired by the work of Barbara Stanley and Greg Brown (refer to Knox et al., 2012) and their team’s use of SAFE-VET, a onetime suicide-specific intervention focused on safety planning and the use of nondemand telephone follow-up, CAMS Brief Intervention (CAMS-BI) is on the research drawing board. CAMS-BI would be a one-session intervention using the typical CAMS first session procedure with no expectation of continuing care beyond this session. In this regard, the patient would learn some basic information about their suicide risk and would develop a Crisis Response Plan with the clinician. Like SAFE-VET, we would like to offer nondemand follow-up contact in a modality that is agreeable to the patient (e.g., caring phone calls, texts, e-mails, letters, tweets, Facebook). In addition, patients engaged in CAMS-BI would also receive a coping care package—a box that includes various helpful brochures, hotline numbers, resources, and a copy of *Choosing to Live*, a book by Ellis and Newman (1996) written for suicidal people. As with SAFE-VET and other nondemand follow-up oriented interventions (e.g., Jerome Motto’s “Caring Letter” intervention—see Motto & Bostrom, 2001), CAMS-BI would largely target suicidal patients who are *not* interested in ongoing mental health care and would likely be identified in the emergency department or at discharge from inpatient hospital care. We are currently seeking funding to conduct feasibility research of CAMS-BI to further explore such an intervention model.

#### CONCLUSION

The Collaborative Assessment and Management of Suicidality—and the related use of the Suicide Status Form—has evolved significantly over the past 25 years of clinical use, conceptual development, and research. Our research has shown the SSF to be a valid and reliable assessment tool that provides

both valuable quantitative and qualitative data relevant to current and prospective suicide risk. Years of SSF assessment research have led to an evolution of the SSF, which now functions as a multipurpose assessment, treatment planning, tracking, and outcome-oriented clinical tool. Our line of SSF assessment research naturally led to a new line of treatment development research as the CAMS approach slowly emerged through clinical practice, trial and error, and our initial feasibility studies. Since the initial development of CAMS as an intervention, the correlational evidence in support of CAMS is considerable, and initial RCT data are quite promising. Full confirmation of the causal effectiveness of CAMS awaits the completion of the well-powered clinical trials that are now under way. As noted, CAMS is a thera-

peutic framework that reflects both a clinical philosophy about suicidal risk and a particular flexible and adaptable clinical approach to a suicide-specific problem-focused treatment that is designed to enhance nonsuicidal coping and ultimately foster a life worth living. The inherent flexibility of CAMS has led to various uses, innovations, and related adaptations that are shaping some exciting next steps for the use of CAMS. No intervention could ever address every aspect of effective care for the range of suicidal presentations seen in clinical practice. However, it does seem that the use of CAMS does provide at least one useful method for giving the patient—and their clinician—a sense that something meaningful can be done to help save a life that might otherwise be lost to suicide.

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