

# EVALUATION OF EMERGENCY DEPARTMENT CRISIS CENTER FOLLOW-UP—NEW

## A. JUSTIFICATION

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### A1. CIRCUMSTANCES OF INFORMATION COLLECTION

#### **Background**

The Center for Mental Health Services (CMHS) within the Substance Abuse and Mental Health Services Administration (SAMHSA) is requesting clearance for data collection associated with the Evaluation of Emergency Department Crisis Center Follow-up—New. In recent years, building upon their experience providing follow-up services to suicidal hotline callers, crisis centers in the National Suicide Prevention Lifeline (Lifeline) have begun to engage in formal collaborations with hospitals which allow them to extend needed follow-up services to individuals who are seen in emergency departments for suicidal behavior. These emergency department–crisis center collaborations are designed to protect vulnerable individuals against recurrences of suicidal behavior and to facilitate linkage to ongoing mental health care. One measure of the effectiveness of these collaborations would be a reduction in emergency department readmissions for suicidal behavior on the part of individuals receiving crisis center follow-up. The current clearance request aims to assess whether crisis center follow-up of individuals seen in emergency departments following a suicide attempt does in fact reduce emergency department readmissions for suicidal behavior in the subsequent year. The evaluation will involve the analysis of de-identified data extracted from electronic medical records at two hospitals currently referring suicidal patients to Lifeline crisis centers for follow-up care. The hospitals will provide the research team with de-identified data on all patients seen in the emergency department following a suicide attempt during a two-year “pre-collaboration” period prior to the commencement of crisis center follow-up, and during a two-year “collaboration” period, following the commencement of crisis center follow-up. Each emergency department and crisis center pair established its clinical collaboration prior to its participation in this evaluation. An active, ongoing clinical collaboration was an inclusion criterion for evaluation participation. The emergency department-crisis center collaborations were established for purely clinical purposes, independent of the evaluation. As such, these clinical collaborations will continue after the evaluation’s designated “collaboration period” ends.

The overall aim of the project will be to determine the extent to which this collaboration between crisis centers and hospital emergency departments impacts readmission rates for suicidal behavior. This information will be used to advance the field of crisis center support to persons in crisis and inform future directions of the Lifeline.

Suicide is a national public health crisis, and is the tenth leading cause of death in the United States (Centers for Disease Control and Prevention, 2012). Suicide attempt survivors have the highest suicide risk of any group: people who have attempted suicide have a 12%-30% chance of further attempts and a 1%-3% chance of completing suicide within a year of their index attempt (Vaiva et al., 2006). Suicide risk is highest in the first week following discharge. For patients

discharged from inpatient settings, this risk has been found to be 102 times higher in men and 246 times higher in women when compared to the general population (Qin & Nordentoft, 2005). Virtually all serious suicide attempts are initially evaluated in an emergency department setting. Emergency department visits for suicide attempt and self-injury increased by 48% during the 10 years from 1992–2001, while the number of emergency departments decreased by 15% during that time (Larkin, Smith, & Beautrais, 2008). Because of overcrowding of emergency departments and inpatient units, suicide attempt survivors are increasingly being discharged to community settings. Those discharged rarely link to ongoing care and often incur costly repeated emergency department visits. As many as 70% of suicide attempters either never attend their first appointment or drop out of treatment after a few sessions (Knesper et al., 2010). As a result of the discontinuity of mental health care for this high risk population, research has found that 45% of incurred hospital costs for suicide attempt admissions are a result of readmissions to the emergency department (Beautrais & Gibbs, 2004).

Several randomized, controlled trials have demonstrated that following up by telephone or letter with patients discharged from inpatient or emergency department settings can reduce rates of repeat suicide attempts (Vaiva et al., 2006) and of completed suicides (Fleischman et al., 2008; Motto & Bostrom, 2001). There has been less research on the impact of post-discharge follow-up on emergency department readmission rates, an outcome of critical interest to policy makers and hospitals because of the significant healthcare costs involved. An Australian study indicated that proactive telephone support for individuals with recurrent psychiatric hospitalizations reduced the number of hospital days per patient by 45% and saved \$AU895 per person during the year of the intervention, compared to the previous year (Andrews & Sunderland, 2009). This study was initiated for quality assurance purposes, and did not include a control group. Moreover, this study did not specifically address suicidal behavior. The current clearance request will examine the impact of crisis center follow up with suicidal patients seen in emergency departments on subsequent emergency department readmissions for suicidal behavior, thereby assessing the capacity of follow-up to save both lives and critical hospital resources. Two Lifeline crisis centers, along with their partner hospital emergency departments, will be involved in this pilot initiative. This initiative addresses Healthy People 2020 Mental Health and Mental Disorders objective.

Evaluation data provide the information necessary for shaping and influencing program and policy development. Without follow-up data on suicidal persons seen in emergency departments, the efficacy and outcomes of the collaboration between crisis centers and emergency departments cannot be understood, and policies and programs cannot be enhanced as needed to improve critical services to suicidal persons. The goal of this data collection effort is to inform and respond to SAMHSA's first strategic initiative—Prevention of Substance Abuse and Mental Illness—and to Goal 1.3 in particular: *Prevent suicides and attempted suicide among populations at high risk, especially military families, youth, and American Indians and Alaska Natives.*

### **Clearance Request**

SAMHSA is requesting approval for a new data collection activity. The program is operated under authorization of Section 520A of the Public Health Service Act as amended (42USC290bb-32) (see Attachment A). Each year, beginning with the 2001 appropriations bill,

Congress directed that funding be provided for the Suicide Prevention Hotline program. In addition to the Suicide Prevention Hotline Program, funds have been continually allocated for the evaluation of the program. The proposed collection of hospital data on patients admitted to the emergency department following a suicide attempt, as well as crisis center data on those patients who receive crisis center follow-up, is critical to ensuring continued feedback on hotline interventions and to enabling enhancements of these efforts. Over 36,000 persons died by suicide in 2009 (CDC, 2012). Information on the outcomes of persons who received services following an ED admission for a suicide attempt is critical to improving services for this high-risk population. By understanding the impact of follow-up services, crisis centers and emergency departments can better allocate resources and identify appropriate services to strive to reduce this preventable cause of death.

Crisis hotline counselors have been identified by SAMHSA as being uniquely qualified and positioned to provide effective telephone follow-up services to individuals at risk for suicide, including patients discharged from hospital emergency departments. The goals of follow-up with these patients are to provide a safety net for suicidal individuals during the high risk period following discharge and to promote and facilitate linkages to ongoing mental health treatment. Meeting these goals will ultimately result in a reduction of subsequent suicide attempts, emergency department readmissions, and completed suicides. The **Evaluation of Emergency Department Crisis Center Follow-up—New** represents an effort by SAMHSA to improve the methods and standards of service delivery to suicidal persons. The proposed data collection effort will examine the impact of crisis center follow-up with suicidal patients seen in emergency department on readmissions for suicidal behavior—enabling an assessment of the capacity of follow-up to save lives and resources based on a reduction of the number of ED admissions per patient during the year of the follow-up intervention. One emergency department-crisis center pair is located in the Western census region and the other is in the Southern census region. Data will be transmitted to the evaluation team at two points of time for each collaboration pair—once at the end of the pre-collaboration period and once after the end of the collaboration period defined by the evaluation. Emergency department and crisis center pairs were chosen because of their existing collaborations. These clinical relationships will continue beyond the end of the “collaboration period” which has been defined for data abstraction purposes.

This request is for approval of data collection of crisis center and hospital data on patients admitted to emergency departments following a suicide attempt. The two crisis centers train counselors to provide follow-up services to suicide attempters referred from their participating emergency departments.

SAMHSA is requesting OMB review and approval of the following:

- Hospital Data Abstraction Form (see Attachment A)
- Crisis Center Data Abstraction Form (see Attachment B)

## A2. PURPOSE AND USE OF INFORMATION

The data to be collected will contribute to understanding the impact of crisis center follow-up with suicidal patients seen in the participating emergency departments on readmissions for suicidal behavior. Information and findings from data on subsequent emergency department

readmissions for suicidal behavior can help SAMHSA, crisis centers, and emergency departments plan and implement efforts to meet the needs of suicidal patients related to their aftercare. SAMHSA also can use the findings from this evaluation to provide objective measures of its progress toward meeting targets of key performance indicators put forward in its annual performance plans as required by law under GPRA.

Findings can be used by crisis centers to improve their services, processes, and functions and enhance targeted and coordinated services for emergency department patients presenting with suicidal behavior.

The fields of suicidology and mental health services research will benefit in a number of ways from the information gathered. Previous randomized controlled trials have demonstrated improved outcomes for suicidal emergency department patients; however, there is limited data on post-discharge follow-up of these patients on readmission for suicidal behavior—a key priority for policy makers and hospital administrators due to increased resources involved.

The specific data collection is below and followed in order of reference by descriptions of purpose:

- Hospital Data Abstraction Form
- Crisis Center Data Abstraction Form

The **Hospital Data Abstraction Form** will be used to collect data on patients seen at the emergency department following a suicide attempt. De-identified data extracted from hospitals' electronic medical records on suicidal patients will be collected for a the two year period prior to crisis center and emergency department collaboration and for a two year period following crisis center and emergency department collaboration. Relevant patient records will be identified by hospital staff, de-identified, and provided to the evaluation team. Items 1, 2 and 11 are used to link the hospital data with the crisis center data; items 3–5 are potentially modifying demographic factors; items 6–8 provide a measure of the lethality of the suicide attempt and can be used as matching variables for the nested analyses described in section A16; and items 9 and 10 will be used in the analyses as a covariate and outcome measure, respectively. The first data extraction from the emergency departments will cover the two-year, pre-collaboration period. Each emergency department will provide approximately 250 records for each year of the pre-collaboration period. The second data extraction from the emergency departments and the crisis center data extraction will cover the collaboration period. Each emergency department will provide approximately 250 records for each year of the collaboration period. Our sample size was determined based on what the participating emergency departments indicated would be feasible, as well as on calculations using Fleiss (1981) for a simple analysis of the difference between proportions. Subgroup analyses using demographic and lethality variables will be performed on an exploratory basis, to the extent permitted by the data available to us.

The **Crisis Center Data Abstraction Form** will be used to determine which patients were clinically followed by the crisis centers. The patient ID and date of referral will be used to link crisis center data with hospital data. Date(s) of follow-up contact will be used to assess the impact of the length of time from admission to follow-up contact and from follow-up contact to readmission, if any. De-identified information from the crisis center will be collected for the two

year collaboration period only. Procedures for linking patient IDs are designed by each emergency department-crisis center pair. As part of their clinical collaboration, the emergency department and crisis center share with each other identifying information about patients referred for follow-up. However, with the exception of the date(s) of emergency department admission, no identifying information will be shared with the evaluation team.

Each crisis center will provide approximately 250 records for each year of the collaboration period. The crisis center records will be linked to the records provided by the emergency department with which the center is collaborating. (Please note that no identifying links will be shared with the evaluation team.) For patients who did not accept a referral for crisis center follow-up, the crisis center will merely confirm that that patient was not referred. For patients who accept a referral for crisis center follow-up, data abstracted from crisis center records will include the date of referral, whether or not the patient was contacted for clinical follow-up, and the date(s) of follow-up contact, if any. SAMHSA anticipates that of all patients admitted to the ED for suicidal behavior, only a subset will be referred to a crisis center for follow-up, and that of those referred, only a subset will ultimately be contacted by crisis center staff.

We will not examine factors related to the collaboration process, except whether a patient was referred for crisis center follow-up, whether follow up contact was made, and the date(s) of follow-up contact, if any. SAMHSA plans to examine differences in rates of readmission for suicidal behavior, and the length of time between admission and readmission, by these three variables. Our main comparison will be between persons admitted to the ED for suicidal behavior in the pre-collaboration period versus the collaboration period, and, within the collaboration group, between those that received follow-up contact versus those that did not. For the subgroup of patients in the collaboration period who are referred for crisis center follow-up, SAMHSA will also examine the impact of the length of time between ED admission and follow-up contact, and the length of time between follow-up contact and readmission for suicidal behavior. Finally, exploratory subgroup analyses will be performed using gender, age, and diagnosis code.

The pre-collaboration period for each collaborating emergency department-crisis center pair pre-dates the proposed evaluation. Therefore, hospital data abstraction for the pre-collaboration period can take place as soon as OMB clearance has been received and data transmission protocols have been finalized with the participating emergency departments. The hospital and crisis center data abstractions for the collaboration period will take place simultaneously as soon as the collaboration period, as defined by the evaluation, has ended.

### A3. USE OF INFORMATION TECHNOLOGY

The **Hospital Data Abstraction Form** lists data elements to be extracted by hospital staff from appropriate patient records. Data will be provided to the evaluation team in electronic format.

The **Crisis Center Data Abstraction Form** will be completed by crisis center staff for appropriate crisis center records. Data will be provided to the evaluation team in electronic format.

### A4. EFFORTS TO IDENTIFY DUPLICATION

The information will be collected only for the purposes of this program and is not available elsewhere.

#### A5. INVOLVEMENT OF SMALL ENTITIES

The information collected will not have a significant impact on small entities.

#### A6. CONSEQUENCES IF INFORMATION IS COLLECTED LESS FREQUENTLY

The current request represents data collection to be used by SAMHSA to assess progress and process of a potentially lifesaving crisis intervention program involving collaboration between emergency departments and crisis centers.

#### A7. CONSISTENCY WITH GUIDELINES OF 5 CFR 1320.5

This information collection fully complies with 5 CFR 1320.5 (d) (2.)

#### A8. CONSULTATION OUTSIDE THE AGENCY

SAMHSA published a 60-day notice in the *Federal Register* on Day of Week, Month day, year (FRN XX-XXXX), soliciting public comment on this study. SAMHSA received no comments on the planned data collection. A copy of the 60-day notice can be found in Attachment C.

Consultation on the design, instrumentation, data availability and products, and statistical aspects of the evaluation occurred throughout the development of the evaluation design process. Although this data collection does not directly affect current initiatives in any other Federal agency, a number of Federal agencies are concerned about suicide prevention. CMHS briefed representatives from the following agencies on the evaluation's design and goals:

- Centers for Disease Control and Prevention
- Indian Health Service
- National Institute of Mental Health
- Health Resources and Services Administration
- Veterans Administration

#### A9. PAYMENT TO RESPONDENTS

There are no direct respondents involved in data collection. As such, no financial incentives will be provided as part of this data collection effort.

The participating crisis centers will receive a stipend of \$5,000 as a financial incentive through the evaluation in the event that they are not already receiving SAMHSA funding.

#### A10. ASSURANCE OF CONFIDENTIALITY

All data to be analyzed will be de-identified before it is provided to the evaluation team by the hospitals and crisis centers. It will not be possible for the evaluation team to link the data to identifiable information. While the hospitals and the crisis centers may have links to patient

identifiers, the evaluation team will not have access to these links. Therefore, there is no possibility of a breach of confidentiality.

#### A11. QUESTIONS OF A SENSITIVE NATURE

Because this project concerns suicide prevention, it is necessary to analyze patient data that is potentially sensitive. All of the data collected by the participating crisis center and companion emergency department is collected on a routine basis for clinical purposes unrelated to this data collection request. This data will be de-identified before it is shared with the evaluation team.

#### A12. ESTIMATES OF ANNUALIZED HOUR BURDEN

Burden estimates presented in Table 1 are based on information supplied by various sources. Abstraction forms were developed and piloted by the contractor to determine average burden estimates. These measures include the **Hospital Data Abstraction Form** and the **Crisis Center Data Abstraction Form**.

A total of 2 hospital staff across the two participating emergency departments will review and identify appropriate patient data and will complete the **Hospital Data Abstraction Form** for 2,000 patients. A total of 2 crisis center staff across the two participating crisis centers will abstract appropriate patient information from the crisis center database and will complete the **Crisis Center Data Abstraction Form**.

**Table 1**  
**Evaluation of Emergency Department Crisis Center Follow-up—New**  
**Estimated Annual Burden**

Note: Total burden is annualized over the 3-year clearance period.

Instrument	Number of Respondents	Responses per Respondent <sup>1</sup>	Total Number of Responses	Burden per Response (hours)	Annual Burden (hours)	Hourly Wages	Total Hourly Costs <sup>1</sup>
Hospital Data Abstraction Form	2	334	667	.04	27	\$37.19 <sup>2</sup>	\$1,004
Crisis Center Data Abstraction Form	2	167	333	.04	13	\$20.48 <sup>3</sup>	\$266
<b>Total</b>							
<b>Total</b>	<b>4</b>				<b>40</b>		<b>\$1270</b>

1. Rounded to the nearest whole number.

2. Assuming mean hourly wage of database administrators taken from Bureau of Labor Statistics, *Occupational Employment and Wages, 2011*. <http://www.bls.gov/oes/current/oes151141.htm>

3. Assuming mean hourly wage of mental health counselors taken from Bureau of Labor Statistics, *Occupational Employment and Wages, 2011*. <http://www.bls.gov/oes/current/oes211014.htm>

### A13. ESTIMATES OF ANNUALIZED COST BURDEN TO RESPONDENTS

There are no direct respondents associated with this data collection no capital, startup, operational, or maintenance costs.

### A14. ESTIMATES OF ANNUALIZED COSTS TO THE GOVERNMENT

SAMHSA has planned and allocated resources for the management, processing, and use of the collected information in a manner that enhances its utility to agencies and the public. Including the Federal contribution that funds the evaluation team and Government staff to oversee the effort, the annualized cost to the Government is estimated at \$125,356 that includes the evaluation costs and the cost of Federal staff. These two costs are described below.

Approximately \$122,956 per federal fiscal year for two of the next three years has been awarded to fund the expenses related to developing and implementing the Evaluation of Emergency Department Crisis Center Follow-up. Awards or plans for future awards have been made to cover the continuation of the annualized cost. An estimated 72 hours per year of a senior GS-14



level federal staff member will be required for oversight to the data collection efforts for an annualized cost of \$2,400.

#### A15. CHANGES IN BURDEN

This is a new project.

#### A16. TIME SCHEDULE, PUBLICATION, AND ANALYSIS PLANS

##### **Time Schedule**

The time schedule for the proposed data collection is summarized in Table 2. A three year clearance is requested for this project.

TABLE 2  
Time Schedule

<b>Activity</b>	<b>Timeline</b>
Receive OMB approval for study	April 2013
Data collection	April 2013 to May 2016
Ongoing analysis	June 2016
Final Report	Not to exceed one annually

##### **Publication Plan**

A final report will be submitted to SAMHSA with anticipated subsequent dissemination to other interested parties, such as researchers, policymakers, and program administrators at the Federal, State, and local levels. Although not required under the evaluation contract, it is also anticipated that results from this data collection will be published and disseminated in peer-reviewed publications such as *Suicide and Life Threatening Behavior*, similar to the published articles from prior phases of the hotline evaluation efforts (i.e., Kalafat et al., 2007; Gould et al., 2007; and Gould et al., 2012).

##### **Data Analysis Plan**

All of the data collection and analytic strategies detailed in this package are linked to the questions of interest.

CMHS expects to be able to answer the following questions from the proposed monitoring and data collection:

**What is the impact of crisis center follow-up with suicidal patients on emergency department readmissions?** Nested comparison of 1-year readmission rates for individuals in the collaboration period who received crisis center follow-up calls, and for a matched sample of individuals in the pre-collaboration period, will be performed. This analysis will provide an assessment of the impact of the emergency department–crisis center collaboration on those individuals who receive follow-up calls. In addition, global comparison of 1-year readmission rates during the pre-collaboration and collaboration periods will provide an assessment of the impact of the emergency department–crisis center collaboration on emergency department readmissions for suicidal behavior overall. Whether or not a patient had a prior admission (within the 365 days prior to the index admission) will be analyzed as a possible covariate of subsequent readmissions (within the 365 days following the index admission). Whether or not a patient had a subsequent emergency department admission (within the 365 days following the index admission) is the primary outcome measure. The length of time between admission and readmission will be examined as an additional outcome. For the subset of patients referred for crisis center follow-up, the length of time between ED admission and follow-up contact, and the length of time between follow-up contact and readmission for suicidal behavior (if any) will be considered as additional independent variables. Finally, exploratory subgroup analyses will be performed using gender, age, and diagnosis code, to the extent that available data allows.

#### A17. DISPLAY OF EXPIRATION DATE

The expiration date for OMB approval will be displayed on all data collection instruments for which approval is being sought.

#### A18. EXCEPTIONS TO CERTIFICATION STATEMENT

This collection of information involves no exceptions to the Certification for Paperwork Reduction Act Submissions. The certifications are included in this submission.