Supplementary Online Content

This supplementary material has been provided by the authors to give readers additional information about their work.

eTable 1. Timing of CLASP-ED telephone contacts

Time	Participant to be contacted
Week 1 (ASAP after discharge from ED/hospital)	Patient
Week 2	Patient
Week 3	Significant Other
Weeks 4, 10, 22, 34 and 48	Patient
Weeks 8, 20 and 32	Significant Other

eTable 2. Cox proportional hazards model for the suicide attempts

Variables*	Hazards ratio (95% CI)	P-value
Study phases		
Phase 1 (Treatment as Usual)	Reference	-
Phase 2 (Universal Screening)	0.90 (0.67-1.21)	0.48
Phase 3 (Universal Screening + Intervention)	0.73 (0.55-0.97)	0.03
Covariates		
Age categories (quartiles)		
18-25.9 years	Reference	-
26-36.9 years	1.11 (0.78-1.59)	0.55
37-46.9 years	1.01 (0.70-1.47)	0.96
≥47 years	1.17 (0.78-1.74)	0.45
Female sex	1.06 (0.82-1.37)	0.68
Lives alone	0.91 (0.69-1.20)	0.52
Served in the military	0.85 (0.50-1.42)	0.53
Coexisting medical disorder†	0.96 (0.73-1.26)	0.75
Coexisting psychiatric disorder‡	2.32 (1.28-4.22)	0.01
Lifetime history of suicide attempt	1.29 (0.89-1.87)	0.17
Lifetime history of aborted attempt	1.02 (0.79-1.32)	0.89
Lifetime history of interrupted attempt	1.13 (0.86-1.47)	0.39
Lifetime history of non-suicidal self-injury	1.35 (1.04-1.75)	0.02
Columbia Suicide Severity Rating Scale (linear term)§	1.34 (0.90-1.99)	0.15

Columbia Suicide Severity Rating Scale (quadratic term)§	0.95 (0.87-1.02)	0.16
ED visit for psychiatric problems within the past 6-months	1.22 (0.89-1.67)	0.23
Hospitalization for psychiatric problems within past 6-months	2.29 (1.65-3.17)	<0.001
Suicide attempt in past week	1.36 (1.03-1.79)	0.03
Current alcohol misuse	1.38 (1.07-1.79)	0.01
Current drug use	0.98 (0.76-1.26)	0.88
Psychological distress (Global Severity Index score)¶	1.00 (0.98-1.02)	1.00
Quality of life (SF-6D score)¶	0.98 (0.95-1.06)	0.98

Abbreviation: CI, confidence interval; ED, emergency department

* None of the indicator variables for the participating sites were statistically significant

(all P>0.05)

† Defined by heart disease, cancer, HIV infection, diabetes, stroke, or chronic pain.

‡ Defined by depression, bipolar disorder, anxiety disorder, or schizophrenia.

§ Quadratic term included in the model based on likelihood ratio test. β-coefficient for

the linear term, 0.30; β-coefficient for the quadratic term, -0.06.

¶ Hazard ratio for a one-unit increase in the corresponding scale.

eTable 3. Negative binomial regression model for suicide attempts as a count variable

Variables*	Risk ratio (95% CI)	P-value
Study phases		
Phase 1 (Treatment as Usual)	Reference	-
Phase 2 (Screening Only)	0.93 (0.70-1.23)	0.61
Phase 3 (Intervention)	0.75 (0.57-0.98)	0.04
Covariates		
Age categories (quartiles)		
18-25.9 years	Reference	-
26-36.9 years	1.19 (0.85-1.68)	0.31
37-46.9 years	1.01 (0.70-1.45)	0.97
$\geq$47 years	1.24 (0.85-1.81)	0.27
Female sex	1.07 (0.83-1.38)	0.58
Lives alone	0.92 (0.71-1.20)	0.55
Served in the military	0.79 (0.48-1.32)	0.37
Coexisting medical disorder†	0.97 (0.75-1.27)	0.85
Coexisting psychiatric disorder‡	2.31 (1.30-4.10)	0.004
Lifetime history of suicide attempt	1.25 (0.87-1.79)	0.23
Lifetime history of aborted attempt	1.05 (0.81-1.35)	0.72

Lifetime history of interrupted attempt	1.06 (0.81-1.37)	0.68
Lifetime history of non-suicidal self-injury	1.35 (1.05-1.74)	0.02
Columbia Suicide Severity Rating Scale (linear term)§	1.25 (0.86-1.84)	0.24
Columbia Suicide Severity Rating Scale (quadratic term)§	0.96 (0.89-1.04)	0.29
ED visit for psychiatric problems within the past 6-months	1.22 (0.90-1.65)	0.2
Hospitalization for psychiatric problems within past 6-months	2.05 (1.50-2.80)	<0.001
Suicide attempt in past week	1.44 (1.11-1.88)	0.01
Current alcohol misuse	1.29 (1.01-1.65)	0.05
Current drug use	0.87 (0.68-1.11)	0.26

Psychological distress (Global Severity Index score)¶	1.00 (0.98-1.02)	0.98
Quality of life (SF-6D score)¶	1.00 (0.95-1.05)	0.98

Abbreviation: CI, confidence interval; ED, emergency department

* None of the indicator variables for the participating sites were statistically significant (all P>0.05)

† Defined by heart disease, cancer, HIV infection, diabetes, stroke, or chronic pain.

‡ Defined by depression, bipolar disorder, anxiety disorder, or schizophrenia.

§ Quadratic term included in the model based on likelihood ratio test. β-coefficient for the linear term, 0.19; β-coefficient for the quadratic term, -0.03.

eTable 4. Cox proportional hazards model for the suicide attempts including calendar month

Variables*	Hazards ratio (95% CI)	P-value
Study phases		
Phase 1 (Treatment as Usual)	Reference	-
Phase 2 (Universal Screening)	0.88 (0.65-1.18)	0.39
Phase 3 (Universal Screening + Intervention)	0.70 (.52-.93)	0.02
Covariates		
Age categories (quartiles)		
18-25.9 years	Reference	-
26-36.9 years	1.11 (0.78-1.59)	0.56
37-46.9 years	.99 (0.68-1.64)	0.95
≥47 years	1.15 (0.77-1.71)	0.50
Female sex	1.05 (0.81-1.37)	0.71
Lives alone	0.91 (0.69-1.21)	0.53
Served in the military	0.85 (0.51-1.44)	0.55
Coexisting medical disorder†	0.95 (0.72-1.25)	0.74
Coexisting psychiatric disorder‡	2.31 (1.27-4.20)	0.01
Lifetime history of suicide attempt	1.31 (0.89-1.90)	0.15
Lifetime history of aborted attempt	1.02 (0.80-1.34)	0.80
Lifetime history of interrupted attempt	1.15 (0.87-1.51)	0.32
Lifetime history of non-suicidal self-injury	1.35 (1.04-1.75)	0.02
Columbia Suicide Severity Rating Scale (linear term)§	1.39 (0.93-2.07)	0.11
Columbia Suicide Severity Rating Scale (quadratic term)§	0.94 (0.87-1.02)	0.12
ED visit for psychiatric problems within the past 6-months	1.24 (0.90-1.71)	0.19
Hospitalization for psychiatric problems within past 6-months	2.47 (1.78-3.44)	<0.001
Suicide attempt in past week	1.38 (1.04-1.82)	0.02
Current alcohol misuse	1.44 (1.11-1.86)	0.01
Current drug use	1.01 (0.78-1.31)	0.94
Psychological distress (Global Severity Index score)¶	1.00 (0.98-1.02)	0.89
Quality of life (SF-6D score)¶	1.00 (0.95-1.06)	0.91
Site 2	0.83 (0.47-1.44)	0.50
Site 3	1.19 (0.79-1.81	0.41
Site 4	0.77 (0.48-1.24)	0.28
Site 5	1.13 (0.73-1.76)	0.58
Site 6	0.67 (0.41-1.10)	0.11
Site 7	0.94 (0.58-1.53)	0.81

Site 8	0.85 (0.54-1.35)	0.49
Calendar Month 2	1.02 (0.55-1.87)	0.96
Calendar Month 3	1.26 (0.71-2.23)	0.44
Calendar Month 4	0.80 (0.42-1.50)	0.48
Calendar Month 5	0.95 (0.52-1.73)	0.86
Calendar Month 6	1.09 (0.61-1.96)	0.77
Calendar Month 7	1.55 (0.90-2.68)	0.11
Calendar Month 8	1.24 (0.70-2.21)	0.46
Calendar Month 9	1.04 (0.57-1.90)	0.89
Calendar Month 10	1.21 (0.68-2.15)	0.52
Calendar Month 11	0.85 (0.45-1.60)	0.62
Calendar Month 12	1.00 (0.55-1.84)	0.99

Abbreviation: CI, confidence interval; ED, emergency department

* None of the indicator variables for the participating sites were statistically significant (all P>0.05)

† Defined by heart disease, cancer, HIV infection, diabetes, stroke, or chronic pain.

‡ Defined by depression, bipolar disorder, anxiety disorder, or schizophrenia.

§ Quadratic term included in the model based on likelihood ratio test. β-coefficient for the linear term, 0.30; β-coefficient for the quadratic term, -0.06.

¶ Hazard ratio for a one-unit increase in the corresponding scale.

eTable 5. Cox proportional hazards model for the effect of time on suicide attempts within each study phase

Variables*	Hazards ratio (95% CI)	P-value
Study phases		
Phase 1 (Treatment as Usual)	0.91 (0.69-1.22)	0.54
Phase 2 (Universal Screening)	0.98 (0.38-2.55)	0.97
Phase 3 (Universal Screening + Intervention)	0.64 (0.26-1.58)	0.33

eTable 6. Cox proportional hazards model for the suicide composite

Variables*	Hazards ratio (95% CI)	P-value
Study phases		
Phase 1 (Treatment as Usual)	Reference	-
Phase 2 (Universal Screening)	0.98 (0.81-1.20)	0.74
Phase 3 (Universal Screening + Intervention)	0.78 (0.64-0.94)	0.01
Covariates		
Age categories (quartiles)		
18-25.9 years	Reference	-
26-36.9 years	1.17 (0.91-1.50)	0.05
37-46.9 years	1.45 (1.13-1.87)	0.004
≥47 years	1.58 (1.21-2.07)	<0.001
Female sex	1,19 (1.00-1.42)	0.07
Lives alone	0.96 (0.80-1.15)	0.86
Served in the military	0.95 (0.68-1.32)	0.55
Coexisting medical disorder†	1.22 (1.01-1.49)	0.03
Coexisting psychiatric disorder‡	1.59 (1.15-2.20)	0.002
Lifetime history of suicide attempt	1.42 (1.12-1.80)	0.02
Lifetime history of aborted attempt	1.29 (1.08-1.54)	0.002
Lifetime history of interrupted attempt	1.21 (1.01-1.45)	0.18
Lifetime history of non-suicidal self-injury	1.33 (1.12-1.59)	<0.001
Columbia Suicide Severity Rating Scale (linear term)§	1.04 (0.78-1.38)	0.77
Columbia Suicide Severity Rating Scale (quadratic term)§	0.99 (0.94-1.05)	0.86
ED visit for psychiatric problems within the past 6-months	1.11 (0.90-1.38)	0.44
Hospitalization for psychiatric problems within past 6-months	1.56 (1.24-1.97)	<0.001
Suicide attempt in past week	0.95 (0.79-1.15)	0.45
Current alcohol misuse	1.02 (0.86-1.22)	0.90
Current drug use	1.06 (0.89-1.26)	0.44
Psychological distress (Global Severity Index score)¶	1.00 (0.99-1.02)	0.66
Quality of life (SF-6D score)¶	0.98 (0.95-1.02)	0.29

Abbreviation: CI, confidence interval; ED, emergency department
* None of the indicator variables for the participating sites were statistically significant (all P>0.05)
† Defined by heart disease, cancer, HIV infection, diabetes, stroke, or chronic pain.
‡ Defined by depression, bipolar disorder, anxiety disorder, or schizophrenia.

§ Quadratic term included in the model based on likelihood ratio test. β-coefficient for the linear term, 0.82; β-coefficient for the quadratic term, 0.79.

eTable 7. Negative binomial regression model for the suicide composite as a count variable

Variables*	Risk ratio (95% CI)	P-value
Study phases		
Phase 1 (Treatment as Usual)	Reference	-
Phase 2 (Screening Only)	0.97 (0.81-1.16)	0.74
Phase 3 (Intervention)	0.78 (0.65-0.93)	0.01
Covariates		
Age categories (quartiles)		
18-25.9 years	Reference	-
26-36.9 years	1.26 (1.00-1.58)	0.05
37-46.9 years	1.41 (1.12-1.78)	0.004
≥47 years	1.60 (1.25-2.04)	<0.001
Female sex	1.16 (0.99-1.37)	0.07
Lives alone	0.99 (0.83-1.16)	0.86
Served in the military	0.91 (0.67-1.24)	0.55
Coexisting medical disorder†	1.22 (1.02-1.46)	0.03
Coexisting psychiatric disorder‡	1.67 (1.22-2.29)	0.002
Lifetime history of suicide attempt	1.30 (1.05-1.62)	0.02
Lifetime history of aborted attempt	1.30 (1.10-1.53)	0.002
Lifetime history of interrupted attempt	1.12 (0.95-1.32)	0.18
Lifetime history of non-suicidal self-injury	1.32 (1.13-1.55)	<0.001
Columbia Suicide Severity Rating Scale (linear term)§	1.04 (0.80-1.34)	0.77
Columbia Suicide Severity Rating Scale (quadratic term)§	1.00 (0.95-1.05)	0.86
ED visit for psychiatric problems within the past 6-months	1.08 (0.89-1.30)	0.44
Hospitalization for psychiatric problems within past 6-months	1.41 (1.15-1.73)	<0.001
Suicide attempt in past week	1.07 (0.90-1.27)	0.45
Current alcohol misuse	1.01 (0.86-1.19)	0.90
Current drug use	0.94 (0.81-1.10)	0.44
Psychological distress (Global Severity Index score)¶	1.00 (0.99-1.02)	0.66
Quality of life (SF-6D score)¶	0.98 (0.95-1.02)	0.29

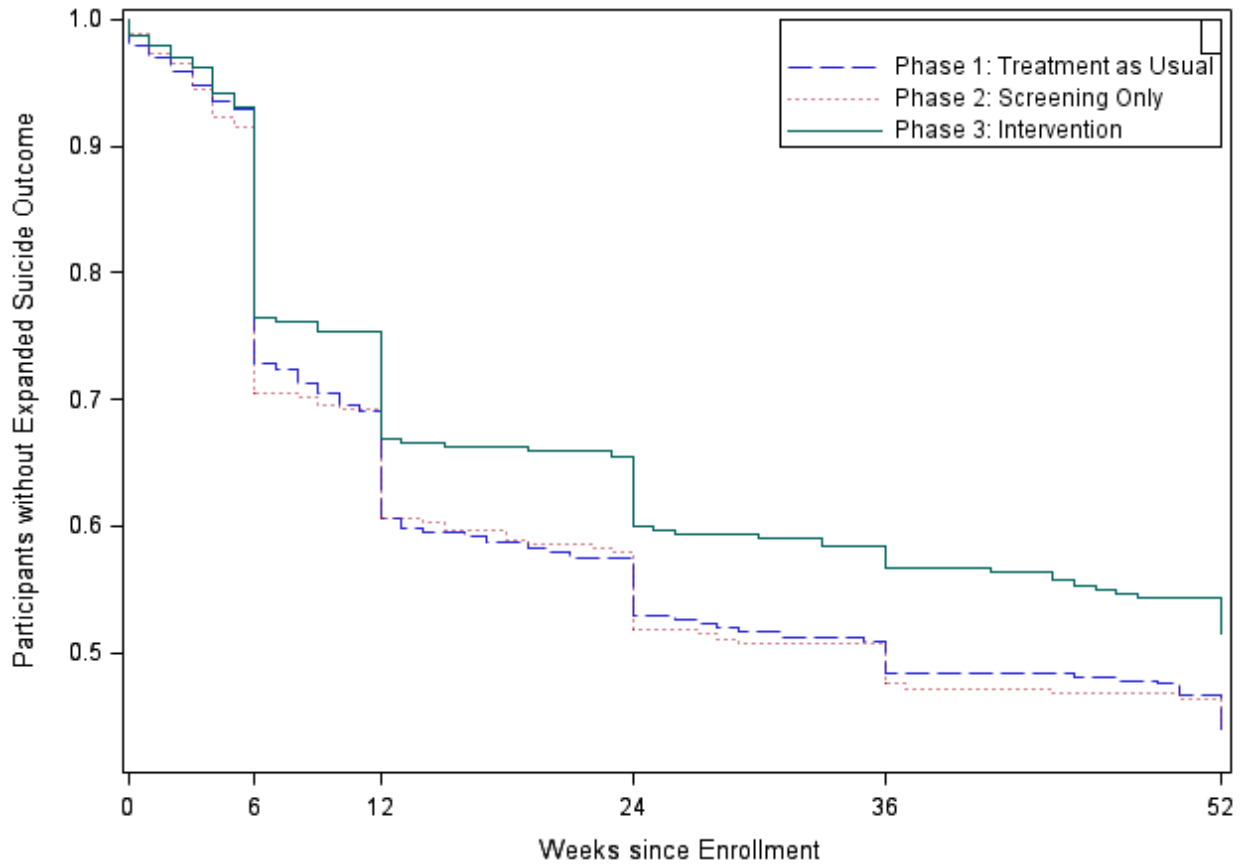Abbreviation: ED, emergency department

* None of the indicator variables for the participating sites were statistically significant (all P>0.05)

† Defined by heart disease, cancer, HIV infection, diabetes, stroke, or chronic pain.

‡ Defined by depression, bipolar disorder, anxiety disorder, or schizophrenia.

§ Quadratic term included in the model based on likelihood ratio test. β-coefficient for the linear term, 0.07; β-coefficient for the quadratic term, -0.01.

¶ Hazard ratio for a one-unit increase in the corresponding scale.

eFigure. Proportion of participants who remained suicide composite–free over time

Number of Participants at Risk

Phase 1	497	462	271	215	183	158
Phase 2	377	345	209	171	143	123
Phase 3	502	466	282	238	200	180

The Universal Screening phase (Phase 2) vs. the Treatment as Usual phase (Phase 1): $P=$ 0.91 by log-rank test. The Universal Screening + Intervention phase (Phase 3) vs. the Treatment as Usual phase (Phase 1: $P=$0.03 by log-rank test.