



Youth Suicide: Addressing the Issue through Prevention and Intervention



March 6, 2006
20th Annual Research Conference: A System of Care for Children's Mental Health: Expanding the Research Base

Suicide: A Leading Public Health Concern



- Nearly 50% of violent deaths worldwide are attributed to suicide
lives lost to suicide > lives lost to homicide > lives lost to war
- Suicide is the 11th leading cause of death in the United States
 - approximately 30,000 people in the U.S. die of suicide each year

Age Range	Suicide Rank	Higher rates of suicide completion among...
5-14 yrs	5 th	✓ Males
15-24 yrs	3 rd	✓ Rural area residents
25-44 yrs	4 th	✓ Native youth
45-64 yrs	8 th	



Suicide Prevention: The National Priority

1999	Surgeon General's Call to Action to Prevent Suicide	<ul style="list-style-type: none"> ✓ Suicide is a public health problem ✓ Recommendations for national strategy ✓ AIM blueprint for reducing suicide
2001	National Strategy for Suicide Prevention: Goals and Objectives for Action	<ul style="list-style-type: none"> ✓ Public health approach to suicide prevention ✓ National suicide prevention strategy ✓ 11 goals and objectives
2002	National Institute of Medicine: Reducing Suicide a National Imperative	<ul style="list-style-type: none"> ✓ Epidemiology & risk factors ✓ Interventions ✓ Recommendations
2003	The President's New Freedom Commission on Mental Health - Achieving the Promise: Transforming Mental Health Care in America	<ul style="list-style-type: none"> ✓ 6 goals and recommendations ✓ Goals 1 and 3 relate to suicide
2005	Transforming Mental Health Care in America, The Federal Action Agenda: First Steps	<ul style="list-style-type: none"> ✓ Five Principles ✓ Initial Action Step ✓ Launch the National Action Alliance for Suicide Prevention

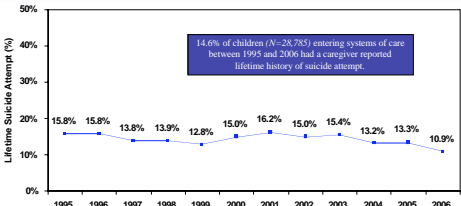



Suicide: Prevention & Intervention

- Public health approach:**
 - Increase awareness of risk factors
 - Increase identification of risk factors
 - Improve effective referrals to treatment
 - Enhance treatment options






Lifetime History of Suicide Attempt Among Children Entering Systems of Care: Across the Years



Year	Percentage (%)	n
1995	15.8%	1,866
1996	15.8%	3,325
1997	13.8%	2,648
1998	13.9%	2,880
1999	12.8%	1,643
2000	15.0%	2,260
2001	16.2%	3,317
2002	15.0%	3,740
2003	15.4%	2,865
2004	13.2%	2,413
2005	13.3%	1,613
2006	10.9%	760



Based on caregiver report at intake into services
 Includes data gathered from communities funded between 1994 and 2004
 Based on available suicide attempt data gathered between 1995 and October 2006
 The caregiver reported age range of the children in this sample: 1 to 21 years.

Suicidal Ideation & Behavior is Common Among Children Entering Systems of Care


- Among children entering SOC services in communities funded 2002-2004:**
 - 18.9% were referred for problems related to suicide (n=6,472)
 - 18.4% had a life time history of suicide attempt (n=2,004)
 - Among attempters, 44.1% had attempted in the prior 6 months
 - Among attempters, 67.1% had attempted more than once

Based on combined caregiver and youth report

Existing Challenges and Symposium Goals


Existing Challenges	Symposium Goals
<ul style="list-style-type: none"> Reporting and information sources for the identification of suicidal behavior Suicide attempt among youth in service Available resources for youth identified at risk prior to or after receipt of treatment 	<ul style="list-style-type: none"> Provide information on the reporting and experience of suicidal behavior among youth served in SOC's Discuss recent federally funded youth prevention efforts Discuss importance of integrating well-evaluated prevention efforts into SOC

MACRO 

Symposium Overview


Three related papers

- 1) Suicide attempt subsequent to entering system of care services: How often does it happen, and to whom?
- 2) Congruence of caregiver and youth reports of suicidal ideation and suicide attempts
- 3) Evaluation of suicide prevention program and integration of suicide prevention into systems of care: An overview of the Cross-site Evaluation of the Garrett Lee Smith Suicide Prevention Initiative

MACRO 


Congruence of Caregiver and Youth Reports of Suicidal Ideation and Suicide Attempts

Anna Krivelyova, MA
Robert L. Stephens, PhD

MACRO 


Overview

- Determining risk for suicide is complex because of respondent-related factors (e.g., reluctance to disclose)
- Measuring youth suicide risk is complicated further by issues related to the source of information (e.g., youth vs. caregiver)

MACRO 


Overview

- Families often function as advocates and primary decision-makers for their children's treatment
- How well families serve that role may depend on the level of congruence between caregiver and child perspective
- This study examines the congruence of caregiver and youth reports of suicidal ideation and suicide attempts and explores predictors of congruence.

MACRO 

Methods

- Descriptive and outcomes study of the national evaluation of SOC communities funded in 2002-2004
- Children 11 years or older
- 789 children and families with complete data on suicide ideation
- 783 children and families with complete data on suicide attempts
- Measures used: Behavioral and Emotional Rating Scale (BERS), Columbia Impairment Scale (CIS), and the Caregiver Strain Questionnaire (CGSQ).

MACRO 

Results: Congruence

Four categories of congruence:

- neither caregiver nor youth reported ideation (or attempt)
- both caregiver and youth reported ideation (or attempt)
- caregiver reported ideation (or attempt) and youth did not
- youth reported ideation (or attempt) and caregiver did not

MACRO

Results: Congruence

Ideation (n = 789)		Attempts (n = 783)	
Category	Percentage	Category	Percentage
Neither (n = 363)	46.01%	Neither (n = 602)	76.88%
Both (n = 223)	28.26%	Both (n = 85)	10.86%
Caregiver (n = 135)	17.11%	Caregiver (n = 38)	4.85%
Youth (n = 68)	8.62%	Youth (n = 58)	7.41%

- When suicide ideation was reported by at least one of the two respondents, in 52% of all cases respondents agreed
- When suicide attempts were reported by at least one of the respondents, in 47% of all cases respondents agreed

MACRO

Univariate Tests

- Youth and family demographic and clinical characteristics at baseline were compared across *both*, *caregiver*, and *youth* categories
- Chi-square tests were used for categorical variables
- F-tests were used for continuous variables

MACRO

Results: Univariate Tests

	Ideation (n = 426)			Attempts (n = 181)		
	Both	Caregiver	Youth	Both	Caregiver	Youth
Child is Female	49.78%	21.48% ^a	47.06%	58.82%	39.47% ^b	60.34%
Biological Parent	86.10%	87.41%	64.71% ^c	84.71%	89.47%	82.76%
Child Age	14.05	13.76	13.65	14.62	13.92	14.02
Caregiver Age	40.23	41.55	45.00 ^a	40.93	40.08	40.00
Other Adults in the House	75.78%	72.59%	76.47%	75.2%	68.42%	65.52%
Total Children in the House	2.48	2.64	2.32	2.42	2.58	2.62
Income Below Poverty	41.26%	43.7%	52.94%	44.71%	39.47%	43.10%
Caregiver Employed	59.19%	60.74%	60.29%	54.12%	52.63%	63.79%
Child Physically Abused	28.25%	22.96%	27.94%	35.29%	36.84%	18.97% ^a
Child Sexually Abused	24.66%	19.26%	17.65%	31.76%	31.58%	24.14%
Child Used Drugs	26.46%	15.56% ^c	17.65%	38.82%	21.05%	17.24% ^b

a) p-value < 0.001; b) p-value < 0.01; c) p-value < 0.05

MACRO

Results: Univariate Tests

	Ideation (n = 426)			Attempts (n = 181)		
	Both	Caregiver	Youth	Both	Caregiver	Youth
Runaway	41.26%	31.11%	27.94% ^c	51.76%	47.37%	39.66%
Someone Own Age to Talk to	3.91	4.00	3.81	3.84	3.53	4.16
Adult to Talk to	4.14	4.17	3.91	4.20	3.92	4.17
Someone Own Age to Depend on in Case of a Problem	3.47	3.84	3.72	3.56	2.97	4.02
Adult to Depend on in Case of a Problem	4.60	4.81	4.72	4.56	4.34	4.55
CGS Objective	3.18	2.99	2.96 ^a	3.34	3.43	2.63 ^a
CGS Subjective Externalizing	2.81	2.65	2.27 ^a	2.49	2.68	2.53
CGS Subjective Internalizing	4.05	3.83 ^a	3.44 ^a	4.13	4.03	3.65 ^a
Strength Index Report (Caregiver)	75.41	73.92	81.68 ^b	73.26	65.8 ^b	79.4 ^c
CIS in Clinical Range	88.34%	87.41%	75.00% ^a	89.41%	86.84%	75.86% ^c

a) p-value < 0.001; b) p-value < 0.01; c) p-value < 0.05

MACRO

Multivariate Tests

- All variables used in univariate tests and a constant term were entered simultaneously into the model
- Multinomial Logit was used for estimation
- Base category: *both*
- Significant estimates are presented

MACRO

Results: Multivariate Tests

	Ideation (n = 426)				Attempts (n = 181)			
	Caregiver		Youth		Caregiver		Youth	
	coef.	p-val.	coef.	p-val.	coef.	p-val.	coef.	p-val.
Female	-1.442	0.000	-0.094	0.779	-0.968	0.050	0.014	0.975
Biological Parent	0.502	0.221	-1.016	0.026	0.309	0.685	-0.610	0.356
Caregiver Age	-0.037	0.640	0.047	0.032	-0.217	0.683	-0.841	0.089
Income Below Poverty	0.077	0.768	0.702	0.041	-0.014	0.684	-0.042	0.170
Child Physically Abused	-0.276	0.348	-0.005	0.790	0.249	0.635	-1.014	0.045
Child Used Drugs	-0.605	0.079	0.006	0.990	-0.629	0.152	-1.264	0.000
Adult to Talk to Someone Own Age to Depend on in Case of a Problem	-0.063	0.469	-0.188	0.092	0.329	0.237	0.682	0.011
CGS Objective	-0.198	0.226	-0.476	0.003	-0.057	0.727	-0.121	0.429
Strength Index	-0.020	0.640	0.000	0.975	-0.005	0.903	0.016	0.364
CIS in Clinical Range	-0.281	0.539	-0.363	0.480	-1.802	0.036	-0.723	0.294

- ### Summary and Implications
- Caregivers were more likely to report ideation when youth did not
 - Youth were more likely to report suicide attempts when caregivers did not
 - Among predictors of congruency are child's gender, caregiver's age and relation to the child, poverty status of the family, child's risk factors such as history of physical abuse and drug use.

- ### Summary and Implications
- Need for a dynamic framework to account for the possible endogeneity problems (e.g., caregivers report lower strain because they do not know about their child's suicidal ideation)
 - Additional research is needed to replicate this study's findings with other samples and further explore predictors of congruency
 - Need to increase caregiver awareness and early identification of risk factors, ideally targeting caregivers with characteristics predictive of "youth only" reporting

Suicide Attempt Subsequent to Entering System of Care Services: How often does it happen and to whom?



Christine Walrath, PhD

- ### Contextual Overview
- Prior suicide attempt is a risk factor for future suicidal behavior
 - Keeping children in treatment may reduce risk of future suicidal behavior
 - Understanding the characteristics of youth that attempt suicide after entering SOC services is crucial to intervention and prevention

- ### Purpose of this Study
- Exploratory**
 - What are the characteristics of youth who attempt suicide after entering SOC services?
 - * Demographic
 - * Child & Family Psychosocial
 - * Child Clinical
 - * Service
 - How do they compare to youth who do not attempt suicide after enter SOC services?

Data Source & Analytic Approach

- Data gathered**
 - as part of the Outcome Study of the National Evaluation
 - from communities funded in 2002 and 2004
 - between 2002 and 2006, and
 - at intake and 6-month follow-up.
- Sample includes 1,001 youth with valid data on suicide attempt at 6-month follow-up**
- Independent bivariate analyses**
 - Chi-squares and independent t-test
 - between suicide attempt status during first 6-months of service and youth characteristics.



Characteristics: Indicators and Measures

Suicide Attempt during first 6-months of service

=

Either caregiver or youth answers yes

Indicator Measure	Caregiver Report	Youth Report
Demographic		
Sex	32	32
Race/Ethnicity	32	32
Child and Family Psychosocial Characteristics		
Child history of mental abuse	32	32
Child history of physical abuse	32	32
Child history of sexual abuse	32	32
Child history of substance use problem	32	32
Child ever hospitalized mental	32	32
Child ever attempted suicide	32	32
Child number of psychiatric hospitalizations	32	32
Child lived in foster with consent	32	32
Child lived in foster with consent	32	32
Developmental instability with substance use problem	32	32
Developmental instability with mental illness	32	32
Child exposed to violent crime in last six months	32	32
Child victim of crime in last six months	32	32
Child Characteristics at Service Entry		
Columbia Impairment Scale (CIS) total score	32	32
Child Behavior Check List (CBCL) internalizing and externalizing scores	32	32
Reynolds Behavioral Depression Scale (R-BDS) total	32	32
Reynolds Child and Adolescent Manifest Anxiety Scale (RCMAS) total	32	32
Behavior and Emotional Symptoms Index (BESI) total	32	32
Conduct Problem Checklist (CPC) total score	32	32
Child Characteristics at 6-month Follow-up		
Columbia Impairment Scale (CIS) total score	32	32
Child Behavior Check List (CBCL) internalizing and externalizing scores	32	32
Reynolds Behavioral Depression Scale (R-BDS) total	32	32
Reynolds Child and Adolescent Manifest Anxiety Scale (RCMAS) total	32	32
Behavior and Emotional Symptoms Index (BESI) total	32	32
Conduct Problem Checklist (CPC) total score	32	32
Service Examination at 6-month Follow-up		
Number of services received	32	32
Youth Services Survey (YSS) total	32	32

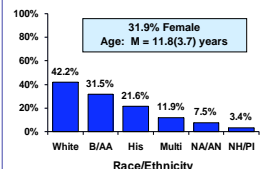





Sample Characteristics

Suicidal Behavior

- 15.2% had a history of suicide attempt prior to entering SOC
- 5.4% attempted suicide in the first 6 months of SOC service
 - 46% of those had a pre-SOC attempt history

Demographic Characteristics








Bivariate Findings: Demographic & Psychosocial Characteristics

- Significant differences in **demographic & psychosocial characteristics** of those who attempted in the 6-months after SOC entry as compared to those did not:

Child Characteristics	Attempt	No Attempt
Female (n=967)	52.0%	32.8%
Hx of Physical Abuse (n=936)	41.2%	22.5%
Hx of Sexual Abuse (n=907)	38.3%	16.4%
Hx of Running Away (n=949)	47.1%	29.4%
Hx of Drug/Alcohol Problem (n=939)	28.0%	15.2%

- Age & race not significantly associated
- Family psychosocial characteristics not significantly associated






Bivariate Findings: Suicidal Behavior Before Entering SOC

- Significant differences in **suicidal behavior** of those who attempted in the 6-months after SOC entry as compared to those did not:

Suicidal Behavior before Entering SOC	Attempt	No Attempt
Hx of Ideation (n=961)	77.4%	42.6%
Hx of Attempt (n=983)	58.5%	18.8%
Of attempters, those that attempted in Last 6-months (n=205)	71.0%	37.9%
Reason for Referral (n=963)	53.8%	22.8%

Based on combined caregiver and youth report






Bivariate Findings: Baseline Clinical Characteristics

- Significant differences in **baseline clinical characteristics** of those who attempted in the 6-months after SOC entry as compared to those did not:

Baseline Clinical Characteristics	Attempt	No Attempt
BERS Strength Index - Caregiver (n=842)	M = 73.9	M = 78.9
BERS Strength Index - Youth (n=606)	M = 86.8	M = 92.2
CBCL Internalizing (n=863)	M = 70.7	M = 65.9
CBCL Externalizing (n=863)	M = 73.1	M = 70.5
RADS - Depression Total (n=637)	M = 60.1	M = 52.6
RCMAS - Anxiety Total (n=614)	M = 60.7	M = 54.5
CIS - Impairment (n=948)	M = 27.8	M = 24.7

- Caregiver strain not significantly associated
- Substance use and dependency not significantly associated






Bivariate Findings: 6-month Follow-up Characteristics

- Significant differences in 6-month follow-up characteristics of those who attempted in the 6-months after SOC entry as compared to those who did not:



6-month Follow-up Characteristics	Attempt	No Attempt
BERS Strength Index – Youth (n=588)	M = 89.5	M = 94.7
CBCL Internalizing (n=868)	M = 70.0	M = 63.2
CBCL Externalizing (n=868)	M = 71.7	M = 68.0
RADS – Depression Total (n=627)	M = 58.3	M = 50.3
RCMAS – Anxiety Total (n=608)	M = 58.6	M = 52.3
CGSQ – Caregiver Global Strain (n=921)	M = 8.8	M = 8.1
Number of Service Received in 1 st 6-months (n=895)	M = 7.2	M = 5.5

- Strength – caregiver not significantly associated
- Substance use and dependency not significantly associated
- Satisfaction with services not significantly associated
- Impairment not significantly associated



Conclusions

- Specific demographic, psychosocial, clinical and service characteristics – both at baseline and 6month follow-up – are significantly associated with suicide attempt subsequent to service entry
- Youth who attempt suicide after entering SOC services:
 - Present to services with unique characteristics
 - Have obvious histories of suicidal behavior
 - Demonstrate unique clinical patterns after service entry
 - Receive more services after SOC



Implications

- Heightened awareness/attention to youth who have previous suicidal behavior
- Standardized suicide risk assessment at intake into services
- Periodic suicide risk re-assessment after entry into SOC
- Provider training/preparation
 - ✓ Suicide risk assessment
 - ✓ Service delivery and intervention with attempters
- Postvention for families of attempters
- Postvention for providers of service to attempters



Suicide Prevention: The Garrett Lee Smith Youth Suicide and Early Intervention Program

Angela Sheehan, Project Director
GLS Cross-Site Evaluation



Suicide Prevention: A Public Health Model

- National Strategy for Suicide Prevention (NSSP)**
 - 11 goals and 68 objectives
- Statewide suicide prevention plans**
 - Mirror the goals and objectives from the NSSP
 - Large focus on early identification and linkage to services
- Colleges and Universities**
 - Large focus on raising awareness, early identification and linking to appropriate care

Cross-cutting Goals and Objectives

- Promote awareness
- Develop support for prevention
- Reduce stigma
- Develop community-based programs
- Train gatekeepers and providers in early identification
 - Including community mental health

Cross-cutting Goals and Objectives

- **Promote effective clinical and professional practices**
 - Response plans, emergency referral plans
- **Increase community linkages**
- **Improve reporting and surveillance systems**
- **Support research and evaluation on suicide**

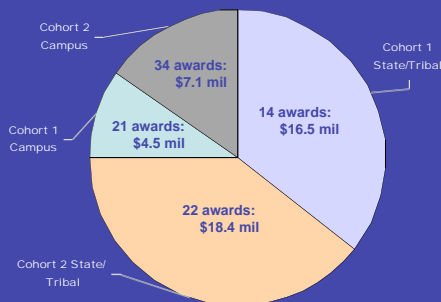


GLS Memorial Act & Initiative

- **Garrett Lee Smith Memorial Act signed into law (October 21, 2004)**
 - First legislation to provide funding specifically for suicide prevention
 - Created two programs:
 - State/Tribal Suicide Prevention and Early Intervention Program
 - Campus Suicide Prevention Program
 - Includes funding for the GLS Suicide Prevention Cross-Site Evaluation



Federal Funding for GLS Suicide Prevention Programs
\$46.5 million

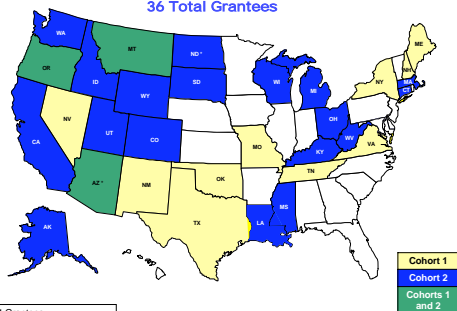


State/Tribal Suicide Prevention Program

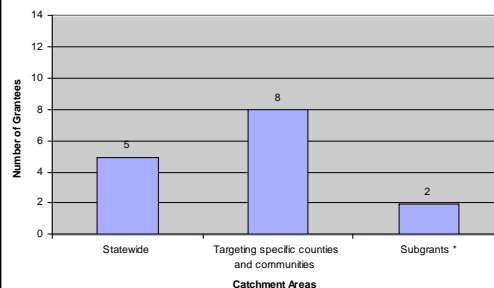
- **State/Tribal Program**
 - Up to \$400,000 per year
 - 3-year cooperative agreements
- **Fundable activities:**
 - Implement statewide suicide prevention strategies
 - Support public and private organizations involved in suicide prevention efforts
 - Provide grants to higher education to coordinate the implementation of suicide prevention efforts
 - Collect and analyze data on suicide prevention efforts
 - Assist eligible entities in achieving targets for youth suicide reductions

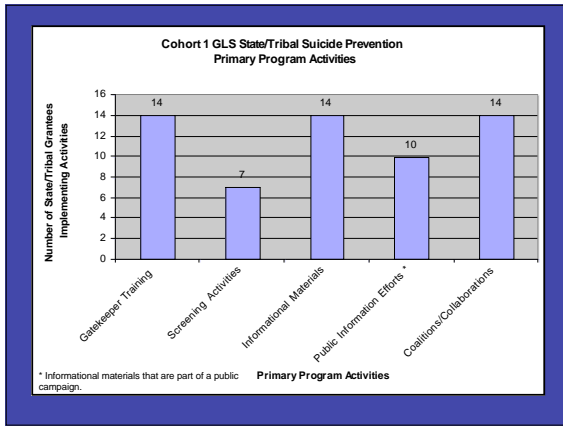


GLS Suicide Prevention State/Tribal Grantees
Cohorts 1 and 2
36 Total Grantees



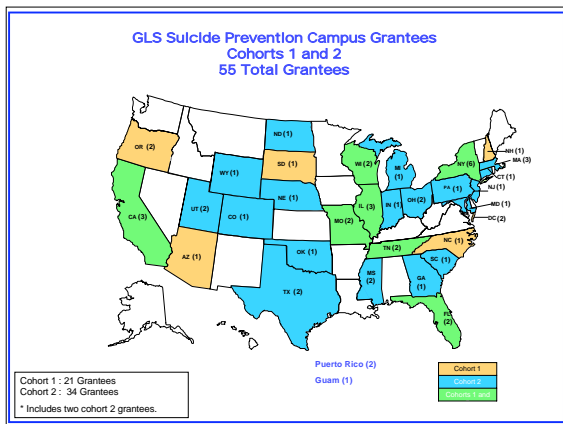
Cohort 1 GLS State/Tribal Suicide Prevention Program
Target Areas





Campus Suicide Prevention Program

- **Campus Program**
 - Up to \$75,000 per year with equivalent match
 - 3-year cooperative agreement
- **Six fundable activities**
 - Training programs
 - Educational seminars
 - Develop infrastructure to provide service linkage
 - Create local suicide hotlines or link to national hotline
 - Informational materials to address warning signs
 - Educational materials for families to increase awareness



Evaluation Requirements: National and Local Importance

State/Tribal Cross-site Evaluation Overarching Questions


Stages of Information Gathering	State/Tribal Overarching Questions
Context	What suicide prevention program activities were planned for implementation across GLS State/Tribal grantees? What existing data infrastructure exists to support State/Tribal programs?
Product	What types of prevention/intervention programs, services and products are used across GLS State/Tribal grantees?
Process	What populations are exposed to and impacted by program services, products, and strategies? To what extent does collaboration related to suicide prevention between youth-serving agencies influence referral mechanisms and service use? To what extent are suicide prevention program activities integrated into the policies and procedures of youth-serving agencies?
Impact	What is the overall impact of program activities on the early identification of youth at risk for suicide and the linking of those youth to mental health or other support services?

State/Tribal Cross-site Evaluation Data Collection Activities

Six Cross-site Evaluation Data Collection/Tracking Activities	
Stages of Information Gathering	Data Collection Activity
Context	Contextual review of funded grant proposals Existing Database Inventory (EDI)
Product	Product and Services Inventory (PSI)
Process	Training Exit Survey (TES) Training Utilization and Penetration Key Informant Interviews (TUP) Referral Network Survey (RNS)
Impact	Early Identification, Referral and Follow-Up (EIRF) Analysis

Campus Cross-site Evaluation Overarching Questions


Stage	Campus Overarching Questions
Context	What are the contextual features for key activities of each grantee?
Product	What products and services are being developed, delivered, and utilized? What are their costs? What audiences/populations are being targeted? Are they consistent with originally proposed products and services? What evidence-based practices are being utilized?
Process	What is the overall level of suicide prevention awareness and knowledge among campus staff/faculty and students? Does it vary as a function of targeted activities? Does it vary as a function of products/services developed? Does it vary as a function of student and faculty characteristics? How does the suicide prevention infrastructure develop and evolve over time?
Impact	What is the impact of program activities? How many students are being referred for mental health services? How many students receive mental health services? How many students are accessing crisis support services?


MACRO 

Campus Cross-site Evaluation Data Collection Activities

Six Cross-site Evaluation Data Collection/Tracking Activities

Stages of Information Gathering	Data Collection Activity
Context	Contextual review of funded grant proposals Existing Database Inventory (EDI)
Product	Product and Services Inventory (PSI)
Process	Suicide Prevention Exposure, Awareness and Knowledge Survey-Student Suicide Prevention Exposure, Awareness and Knowledge Survey-Faculty/Staff Campus Infrastructure Interviews
Impact	MIS data abstraction and submission

MACRO 

- ### National Perspective: What we hope to learn
- **What suicide prevention efforts are being implemented in states and tribal communities across the country**
 - **Results of gatekeeper training and screening on identifying at risk youth and linking them to appropriate services**
 - **Existence and quality of collaborations and infrastructures to support suicide prevention, including community mental health**
- MACRO 

- ### Conclusions
- **High prevalence of suicide ideation and attempts among youth served in systems of care**
 - **GLSMA provides first opportunity for federally funded community-based suicide prevention programs**
 - **Impact on systems of care is two-fold**
 - Increased need for community-based services
 - Resources available to raise awareness among providers and develop response plans
- MACRO 