



GLS PROGRAM IMPACT: THE EVIDENCE TO DATE

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DISCLAIMER

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TOPICS TO BE COVERED

- Establishing an evidence base for GLS
- Short term impacts of GLS
- Long term impacts of GLS
- Using national results locally



ESTABLISHING AN EVIDENCE BASE FOR GLS

EVIDENCE BASE FOR GLS PROGRAM

Gather data and quantify...

Outputs and outcomes

Need for services, services received

Obstacles and facilitators of program implementation

Populations reached

Budgetary conditions and allocations

To provide evidence of...

Life saving impact

Return on investment

Intervention effectiveness

Successful program implementation

EVIDENCE BASE FOR GLS PROGRAM

NOE Data Umbrellas

Continuity of Care

Training

Suicide Safer Care

Strategy Implementation

Extant Data Sources

CDC-WONDER

Census Bureau

Bureau of Labor Statistics

PROXY FOR GLS PROGRAM IMPLEMENTATION

More than 96% of State and Tribal grantees conduct Gatekeeper Trainings

>35,000 Training
Events

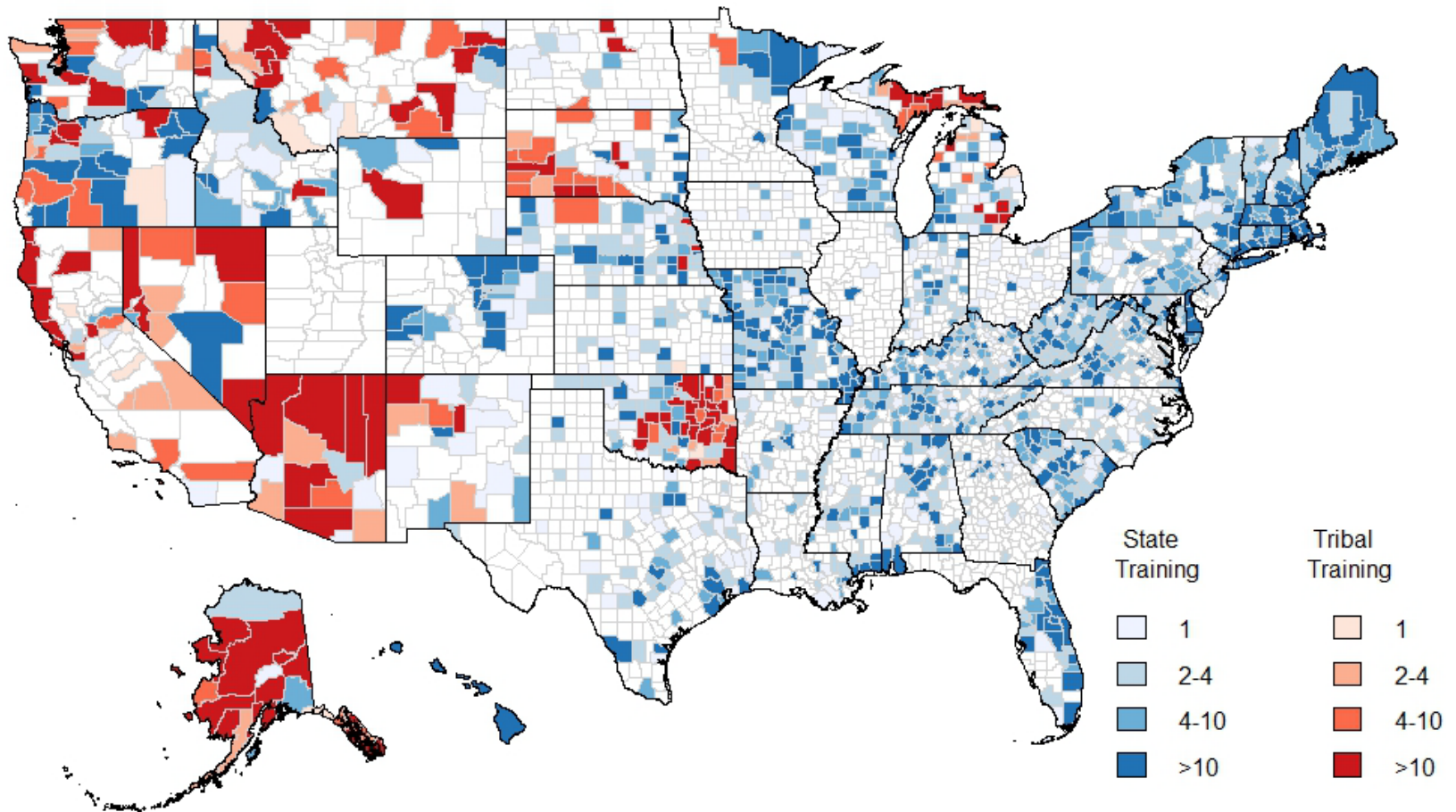
>1.3M Trainees



**data through July 2017*

PROXY FOR GLS PROGRAM IMPLEMENTATION

Counties with GLS Activities (2006-2018)



GLS NOE IMPACT QUESTIONS

As a result of GLS implementation, is there a reduction in...

- **Youth suicide attempts?**
- **Youth suicide mortality?**

Do the **benefits (cost savings) outweigh the cost** of implementing the program?

PROPENSITY SCORE TECHNIQUES

1

Select comparison counties using propensity score matching

2

Select combination of counties closely resembling outcome history

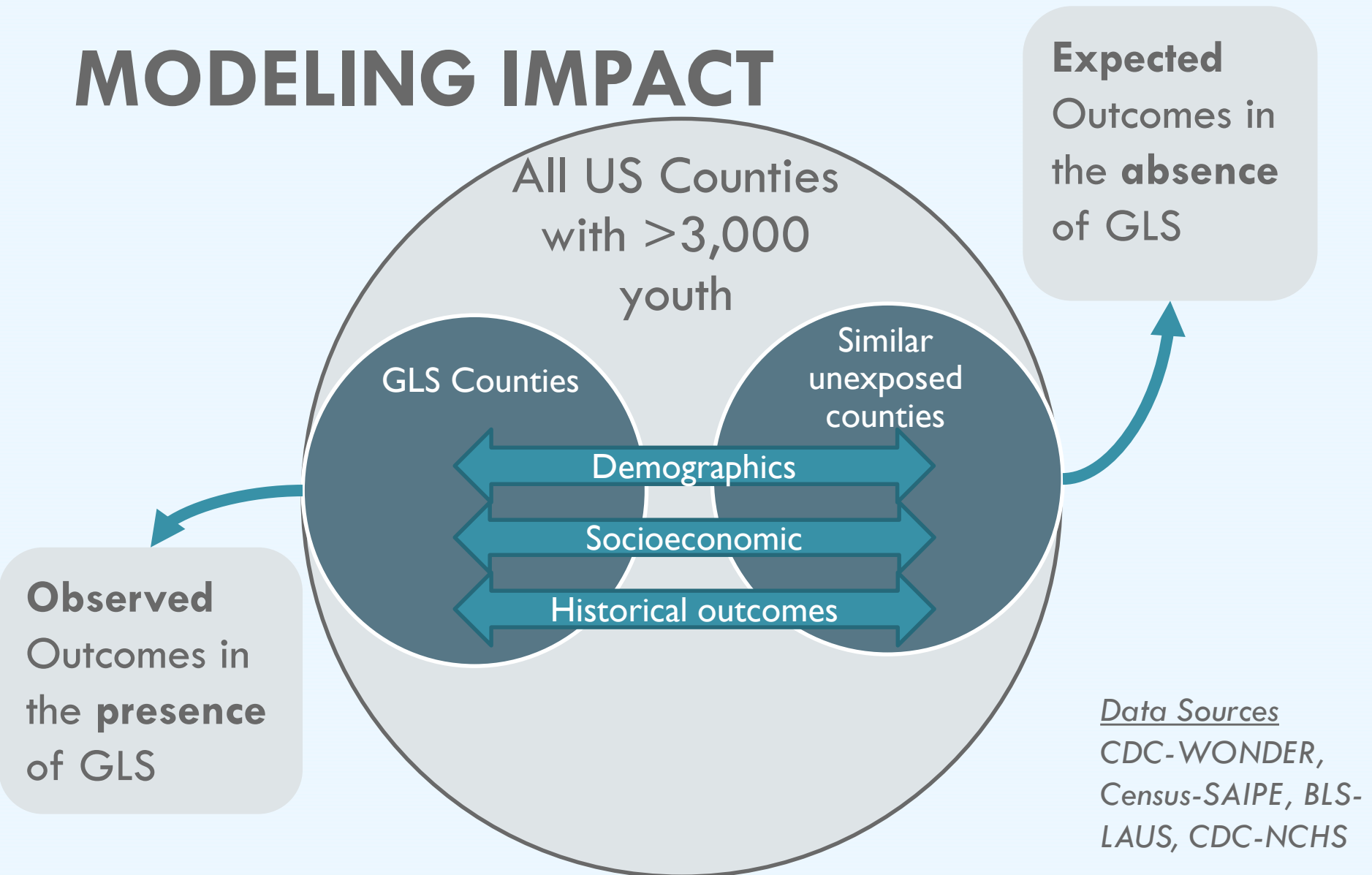
3

Model the impact

4

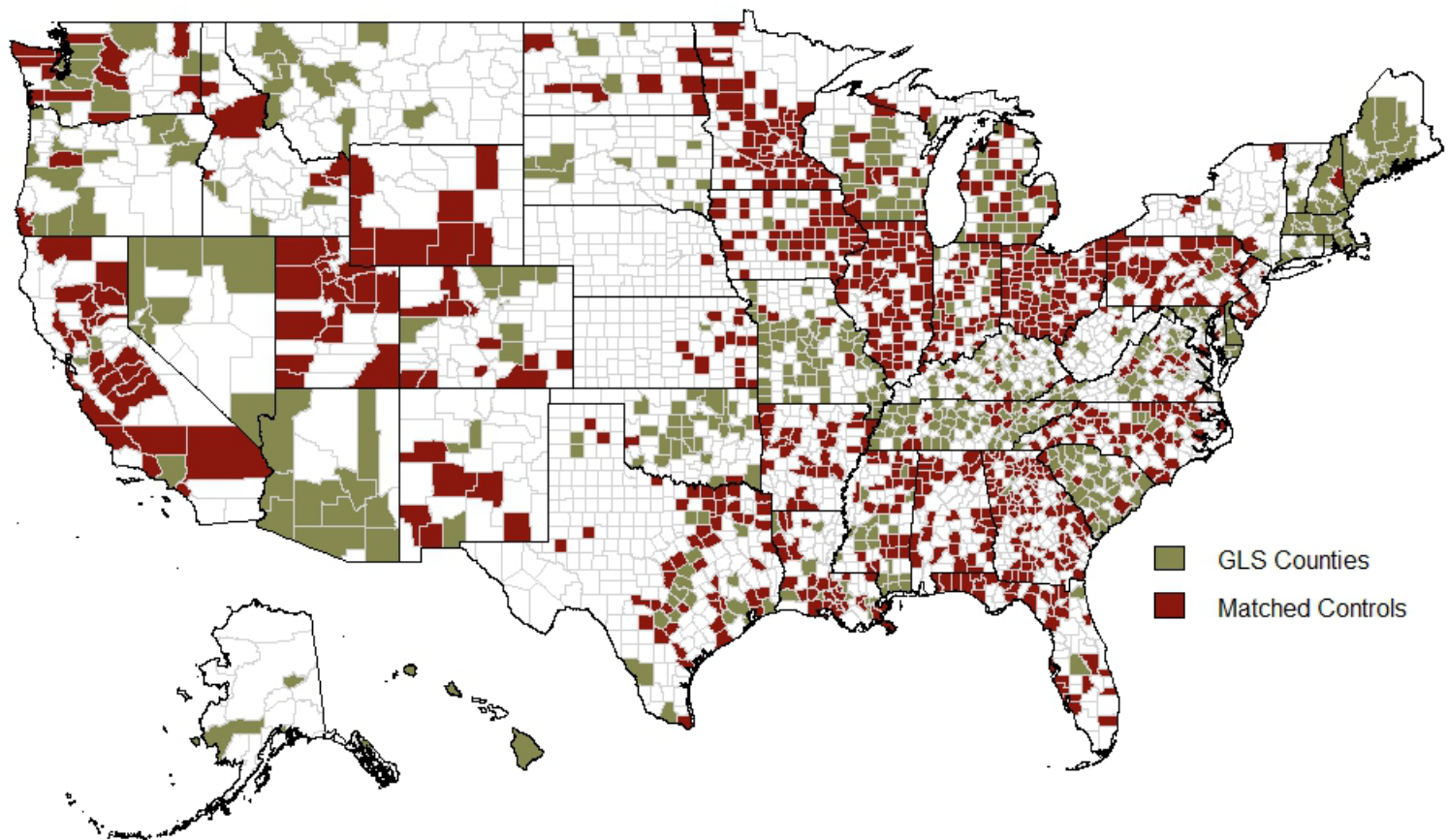
Test model robustness with control outcomes

MODELING IMPACT



MODELING IMPACT – COUNTY MATCHING

Counties with GLS Activities and Matched Controls (2006-2009)





SHORT TERM IMPACTS OF GLS

GLS IMPACT

- I Short-term Impact (2007-2010)
 - Suicide attempts
 - Cost benefit
 - Mortality

GLS IMPACT NOE DATA SOURCE

Short-term Impact

GLS Implementation from 2006-2009

Life Saving Impact and ROI from 2007-2010

GLS grantees

State and Tribal Cohorts 1-5

39 State Grantees and 10 Tribal Grantees

IMPACT ON YOUTH SUICIDE ATTEMPTS

Youth aged 16-23

No effect seen on attempts among adults older than 23 years

Counties with GLS programming from 2006-2009

- 4.9 fewer attempts per 1,000 youth one year following GLS implementation

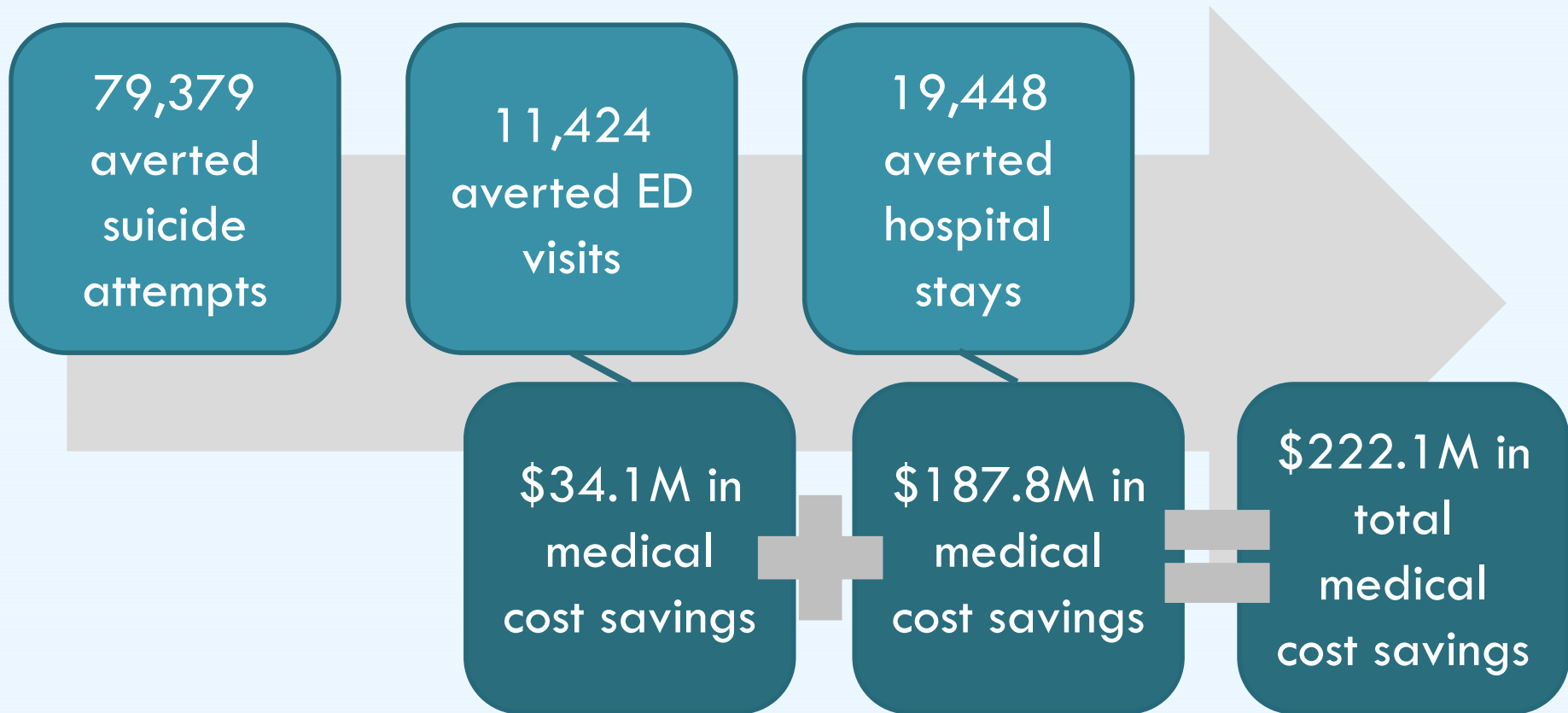
Impact measured from 2007-2010 (short term)

- 79,379 averted suicide attempts through 2010

Modelled impact seen for 1 year following GLS implementation

IMPACT ON COST SAVINGS

Utilized suicide attempt findings (2007-2010)



IMPACT ON COST SAVINGS

**\$222.1M in
total medical
savings over
4 years**

**\$49.4M in
total GLS
costs over 4
years**

**\$4.50 in medical cost
savings for each dollar
invested**

IMPACT ON YOUTH MORTALITY

Youth aged 10-24

No effect seen for adult suicide mortality or non-suicide mortality among youth

Counties with GLS programming from 2006-2009

- 1.3 fewer deaths per 100,000 youth one year following GLS implementation

Impact measured from 2007-2010 (short term)

- 427 lives saved through 2010

Modelled impact seen for 1 year following GLS implementation

GLS IMPACT



Short-term Impact Summary

- Dissipation of effect after 1-year
- Indication that findings were more intense in rural areas

Next Stages:

- What happens when you have more years of outcome data?
- What happens with continued program implementation?
- What is really going on in rural counties?



LONG TERM IMPACTS OF GLS

GLS IMPACT NOE DATA SOURCE

Long-term Impact

GLS Implementation beginning 2006-2009

GLS Life Saving Impact from 2007-2015

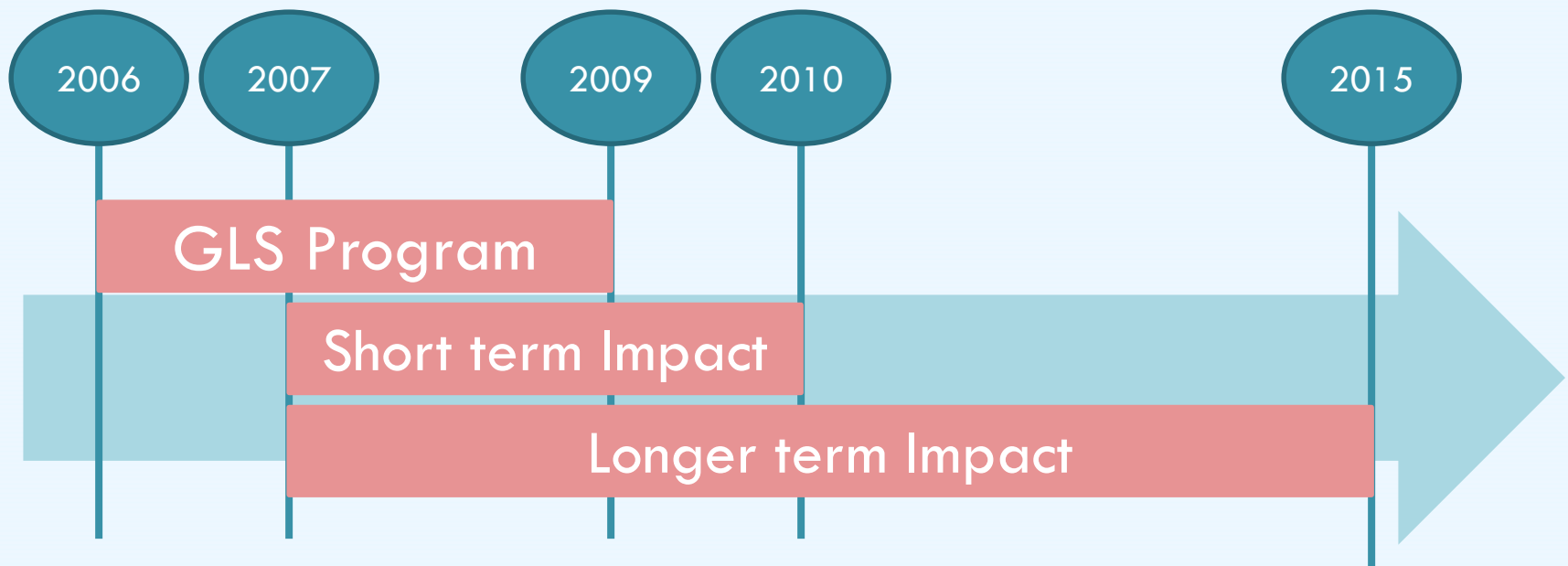
GLS grantees

State and Tribal grantees originally funded in cohorts 1 through 5

97 State Grantees and 39 Tribal Grantees

~40% of GLS counties are rural (<50,000 population)

LONG TERM IMPACT ON YOUTH MORTALITY:



Additional 5 years of impact data

LONGER TERM IMPACT ON YOUTH MORTALITY:

Program overall

No effect seen for adult suicide mortality or nonsuicidal youth mortality

• 0.89 per 100,000 fewer deaths one year following GLS implementation

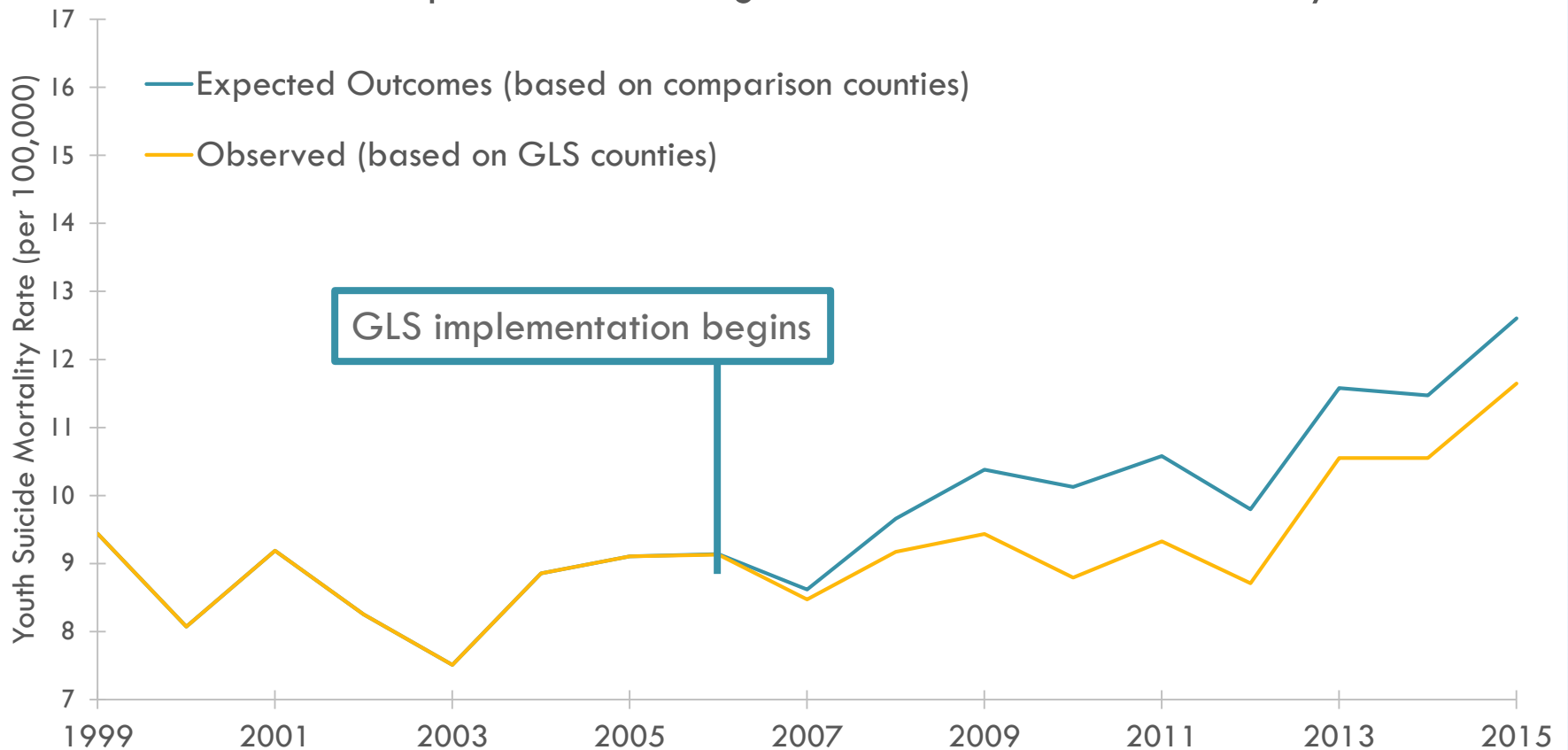
• 1.09 per 100,000 fewer deaths two years following GLS implementation

• 882 lives saved through 2015

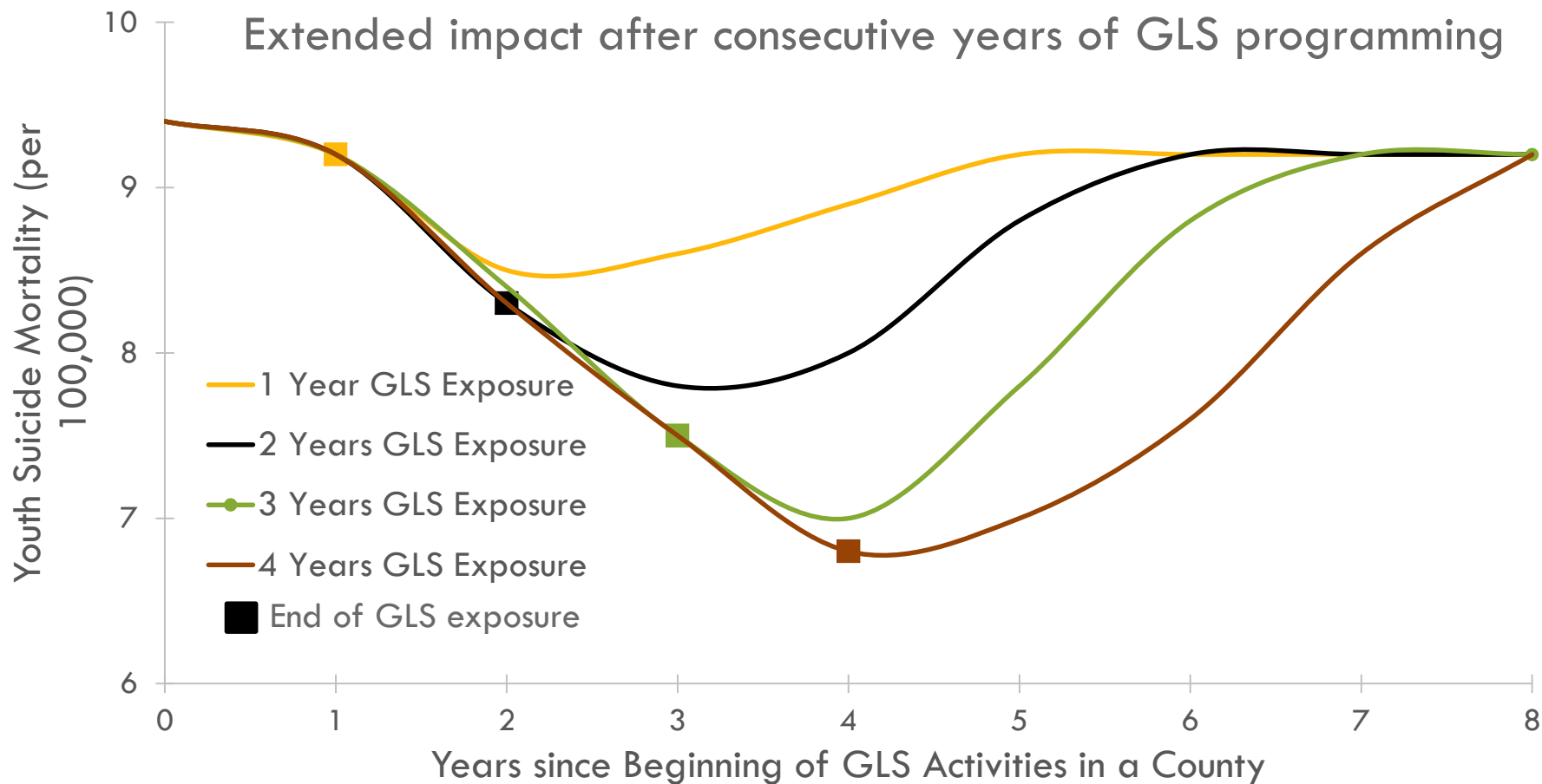
Modelled impact seen for **2 years** following GLS implementation

LONGER IMPACT ON YOUTH MORTALITY

Overall Impact of GLS Program on Youth Suicide Mortality



LONGER IMPACT ON YOUTH MORTALITY



LONGER TERM IMPACT ON YOUTH MORTALITY

Greater impact seen in rural areas

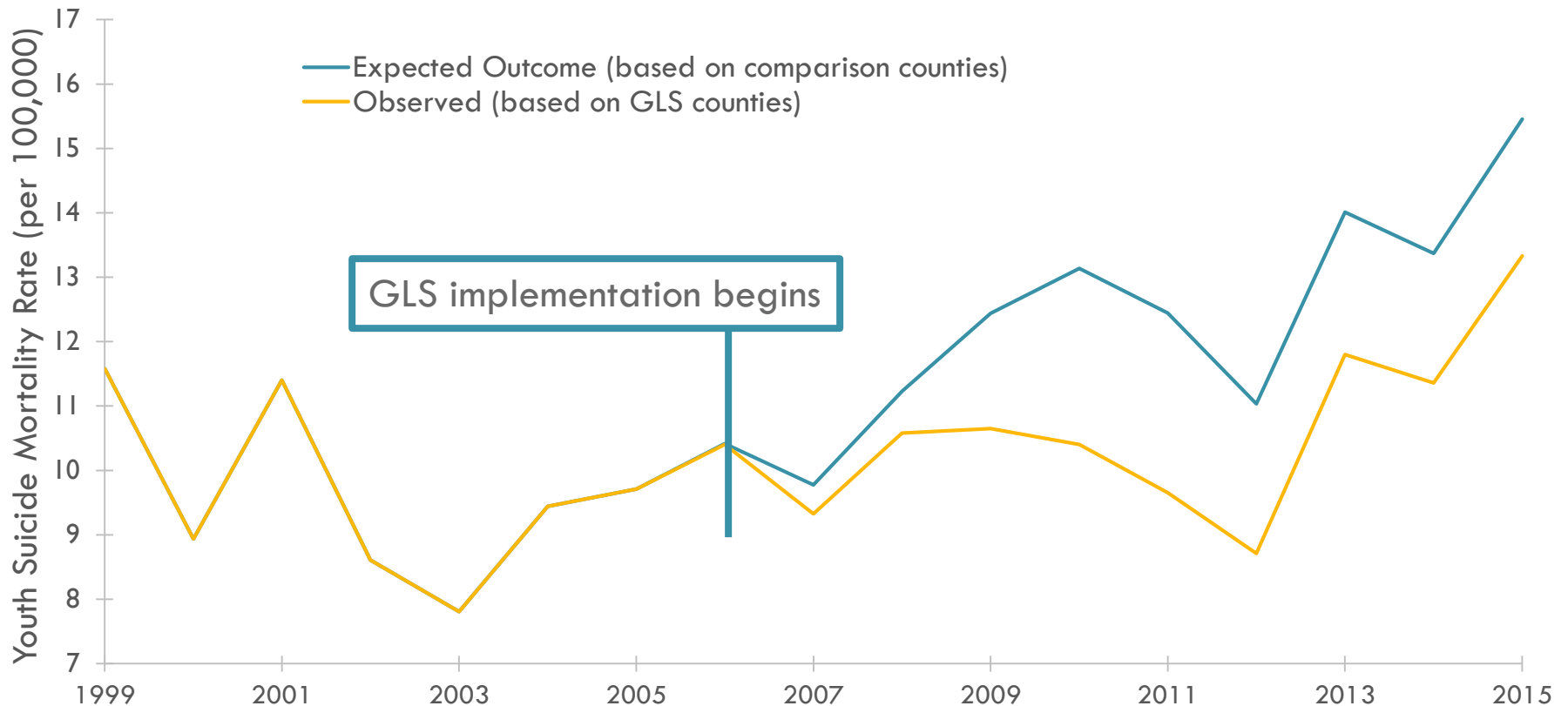
- 2.4 fewer deaths per 100,000 youth 2 years after GLS implementation

- 20% stronger effect in rural counties than in non-rural counties or 1 fewer death per 244,000 youth

Modelled impact seen **2 years** following GLS implementation

LONGER IMPACT ON YOUTH MORTALITY

Impact of GLS Programs on Rural Youth Suicide Mortality





USING NATIONAL PROGRAM FINDINGS LOCALLY

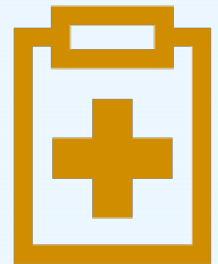
SHORT TERM IMPACTS 2007-2010

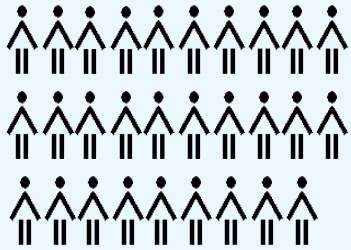
79,379 averted suicide attempts through 2010 (at most 4 years of follow up)

\$222.1M in total medical savings over 4 years of programming

\$4.50 in medical cost savings for each dollar invested

427 lives saved through 2010 (at most 4 years of follow up)





882 lives saved through
2015 (at least 6 years of
follow up)

Extended years of impact
seen after consecutive
years of GLS
programming in a county



20% greater impact in
rural communities

**LONG
TERM
IMPACTS**
2007-2015

TAKING THE MESSAGE HOME

WHAT IS THE LONG TERM IMPACT (2007-2015) OF GLS ON YOUTH SUICIDE RATES?

The impact of GLS implementation on youth suicide mortality, starting one year after implementation, was estimated for counties originally exposed to GLS activities between 2006 and 2009 and includes data from State and Tribal grantees originally funded in cohorts 1 through 5

IN THE PRESENCE OF GLS ACTIVITIES, THE YOUTH SUICIDE RATE WAS LOWER THAN IF GLS HAD NOT BEEN IMPLEMENTED, RESULTING IN

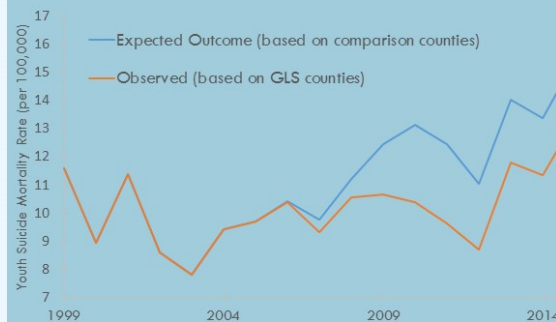
882 LIVES SAVED

THIS EFFECT WAS SEEN FOR UP TO **TWO YEARS** FOLLOWING GLS IMPLEMENTATION IN A COUNTY.



THE POSITIVE IMPACT IS EVEN GREATER IN RURAL COUNTIES [POPULATIONS LESS THAN 50,000]

DIFFERENCE BETWEEN YOUTH SUICIDE RATE IN RURAL GLS COUNTIES AND MATCHED CONTROL RURAL COUNTIES



THE GLS EFFECT ON YOUTH SUICIDE RATES IS

20%

STRONGER

IN RURAL COUNTIES THAN IN NON-RURAL COUNTIES, RESULTING IN **2.4 FEWER DEATHS PER 100,000 YOUTH 2 YEARS AFTER GLS IMPLEMENTATION.**

TAKING THE MESSAGE HOME

SHORT TERM IMPACT OF GLS PROGRAMS (2006-2009) ON YOUTH SUICIDE ATTEMPTS AND YOUTH SUICIDE MORTALITY

The impact of GLS on youth suicide attempts and youth suicide mortality, starting one year after implementation, was determined for youth in counties with GLS activities between 2006 and 2009. This includes activities for State and Tribal grantees in cohorts 1-5.

Is GLS impacting youth suicide attempts?

4.9 FEWER ATTEMPTS PER 1,000 YOUTH ONE YEAR FOLLOWING IMPLEMENTATION OF GLS ($p < 0.05$)

79,379
averted suicide attempts

Suicide attempts determined for youth aged 16-23

Is GLS impacting youth suicide deaths?

Suicide mortality determined for youth aged 10-24

427
lives saved

1.3 FEWER DEATHS PER 100,000 YOUTH ONE YEAR FOLLOWING IMPLEMENTATION OF GLS ($p < 0.05$)

The modelled impact on youth suicide attempts and youth suicide mortality was seen for 1 year following GLS implementation

Garrett Lee Smith Suicide Prevention National Outcomes Evaluation

State/Tribal

February 2018

The Garrett Lee Smith Suicide Prevention National Outcomes Evaluation is supported through contract no. HHS5283201200007/HHS528342002T awarded to ICF International by the Center for Mental Health Services (CMHS), Substance Abuse and Mental Health Services Administration (SAMHSA), US Department of Health and Human Services (HHS). Questions about the information presented can be directed to your ICF Technical Assistance Liaison. For more information about the GLS National Outcomes Evaluation contact Christine Walrath, Ph.D., Principal Investigator.

TAKING THE MESSAGE HOME

The cost savings of GLS programs utilized the short term impact (2007-2010) of GLS implementation on youth suicide attempts in counties exposed to GLS activities between 2006 and 2009. This includes activities for State (n=46 grantees) and Tribal (n=12 grantees) grantees in cohorts 1-5.

DO THE COST SAVINGS OF GLS OUTWEIGH THE COST OF IMPLEMENTING THE PROGRAM?

GLS programs implemented from 2006-2009
AVERTED 79,379 suicide attempts, which avoids...



\$49.4M spent in GLS Program Costs over 4 years, returns...



SAVINGS of \$4.50 in healthcare costs for **EACH DOLLAR** invested

Garrett Lee Smith Suicide Prevention National Outcomes Evaluation

State/Tribal

February 2018

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QUESTIONS TO CONSIDER

- What stakeholders would benefit from knowing these national levels impacts?
- Where can you disseminate these findings?
- How can you incorporate this national-level evidence into your local evaluations efforts?
- How can you use these NOE impacts to inform your program?



Utilizing national
evaluation data to
benefit your program
2:30 – 3:45 TODAY

CONTINUING THE CONVERSATION

Communicating your
data

10:15 – 11:30 TODAY

Communicating your
data

1:00 – 2:15 TODAY

Utilizing national
evaluation data to
benefit your program

2:30 – 3:45 TODAY

REFERENCES

Cost Benefits

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Godoy Garraza, L., Walrath, C., Goldston, D. B., Reid, H., & McKeon, R. (2015). Effect of the Garrett Lee Smith Memorial Suicide Prevention Program on suicide attempts among youths. *JAMA Psychiatry*, 72(11), 1143–1149.

Suicide Mortality

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THANK YOU!